

Rock Products

DEVOTED TO
Concrete and Manufactured
Building Materials

Volume X.

CHICAGO, ILL, NOVEMBER 22, 1910.

Number 5.

CAROLINA PORTLAND CEMENT COMPANY

We are the largest distributors of Portland Cement, Lime Plaster, Fire-brick and General Building Material in the Southern States, and have stocks of Standard Brands at all of the Atlantic and Gulf Seaports, and at our interior mills and warehouses, for prompt and economical distribution to all Southern territory. Write for our delivered prices anywhere. Also Southern agents for the "Dehydratine's" waterproofing material. "Universal," "Acme" and "Electroid" Brands Ready Roofing. Get our prices.

Charleston, S. C. Birmingham, Ala. Atlanta, Ga. New Orleans, La

DEXTER Portland Cement

THE NEW STANDARD

Sole Agents SAMUEL H. FRENCH & CO. PHILADELPHIA



UNION MINING COMPANY

Manufacturers of the Celebrated

DEVOTE a special department to the manufacture of Brick particularly adapted both physically and chemically to

Lime Kiln and Cement Kiln Construction

Large stock carried. Prompt shipments made. Write for quotations on Standard and Special shapes, to

UNION MINING CO.,
Mount Savage, Md.

CAPACITY, 60,000 PER DAY.
ESTABLISHED 1841.



Phoenix Portland Cement

UNEXCELLED FOR ALL USES.

Manufactured by

PHOENIX PORTLAND CEMENT CO.

NAZARETH, PA.

Sole Selling Agent, WILLIAM G. HARTRANFT CEMENT CO.
Real Estate Trust Building, PHILADELPHIA, PENNSYLVANIA.

Ottawa Silica Co.'s Washed White Flint Sand

Is used for sawing stone in more than a dozen states. Cuts more and lasts longer than any other sand on the market. Unexcelled for Roofing, Facing Cement Blocks, White Plaster, etc. Freight rates and prices on application.

OTTAWA SILICA CO., Ottawa, Ill.



FOR GRIFFIN TUBE AND BALL MILLS

Branches:

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PURE OAK TANNED LEATHER BELTING

Send for Our Illustrated Catalog

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NEW ORLEANS

PORTLAND, OREGON

FOR DAMP PLACES



Capacity, 3000 barrels daily

HARBISON-WALKER LIME AND CEMENT KILN LININGS

YOU know what the linings for your cement and lime kilns cost per thousand brick but do you know how much per ton output? That is the cost that is vital, that's why we are anxious you should know. Write us.

Harbison-Walker Refractories Co.
PITTSBURGH :: PENNSYLVANIA

HIGHEST GRADE PORTLAND CEMENT MANUFACTURED



CAPACITY
1,000,000 BARRELS
YEARLY



A PERFECT RECORD FOR TEN YEARS IN ALL KINDS OF CONCRETE WORK

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Chicago Office
Marquette Building.

General Office and Works, LaSalle, Ill.



The Ironton Portland Cement Co.

Manufacturers of the
Celebrated Limestone Brand of Portland Cement

Used by the Railroads in Kentucky, Ohio, West Virginia, and Virginia during the past five years. Cement as finely ground as any on the market. Guaranteed to pass all the standard specifications.

Plant located at Ironton, O., within easy access to seven States, namely, Ohio, Indiana, Kentucky, West Virginia, Virginia, Tennessee and North Carolina.
Shipments via the N. & W. Ry., C. & O. Ry., C. H. & D. Ry., D. T. & I. Ry., or Ohio River.

Write for Prices

The Ironton Portland Cement Co.
Ironton, Ohio



GRAVEL WASHING PLANTS



Stone Crushing Cement and Power Plants

—Ask—
CHICAGO GRAVEL CO., - Chicago, Ill.
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SOUTHERN G. & M. CO., Brook Haven, Miss.
About Their Plants

J. C. Buckbee Company, Engineers, CHICAGO

"LEHIGH" PORTLAND CEMENT



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High Tensile Strength, Finely Ground.
Light and Uniform in Color.
Manufactured by the

Lehigh Portland Cement Co.
ALLENTOWN, PA.

Western Office:
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Capacity, 8,000,000 Yearly



NORTHWESTERN STATES PORTLAND CEMENT COMPANY
MASON CITY, IOWA

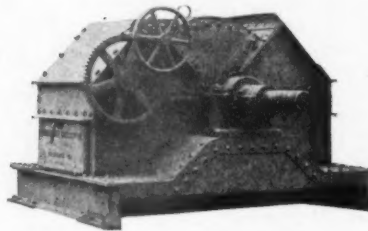
"THE BEST IS NONE TOO GOOD"
HIGHEST GRADE of
Portland Cement

Every Barrel Absolutely Uniform.

R. R. facilities especially adapted
for prompt shipments in
the northwest.

Capacity 1,500,000 bbls. Yearly.

"PENNSYLVANIA" HAMMER CRUSHERS



For Pulverizing Limestone, Lime, Cement Rock, Marl, Shale, Etc.

Main frame of Steel; "Ball and Socket" Self-aligning Bearings; forged Steel Shaft; Steel Wear Liners; Cage adjustable by hand wheel while Crusher is running. No other Hammer Crusher has such a big Safety Factor.

PENNSYLVANIA CRUSHER CO.
Philadelphia
New York Pittsburgh



"CHICAGO AA"

1,250,000 Barrels Annually

HIGHEST QUALITY
"THE BEST THAT CAN BE MADE"

"Chicago AA" Portland Cement is best adapted for use in making concrete because of its absolute uniformity, fineness, prompt hardening and attractive color. "Chicago AA" is second to none, and every barrel is fully guaranteed to meet the requirements of the Standard Specifications.

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Booklets on Request.

Chicago, Ill.



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Alpha Portland Cement

Best in the World for
Sidewalks

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Marquette Building, CHICAGO.

Harrison Building, PHILADELPHIA.

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TWENTY LONG YEARS

of time and weather tried out Ricketson }
famous "Red Brick" Brand.

COLOR

for Mortar, Brick, Cement, Stone, etc., and proved it to be absolutely permanent. Red, Brown, Buff, Purple and Black.

Ricketson Mineral Paint Works
MILWAUKEE, WISCONSIN



Tell 'em you saw it in ROCK PRODUCTS

DEVOTED TO
**Concrete and Manufactured
Building Materials**

Number 5

The shows are great educational factors, incubators as it were, hatching out new ideas which are then developed. The inventor here catches the idea for which he has been vainly struggling, the key to his problem.

What we need is more intelligent co-operation between the manufacturer, the dealer, the architect, the contractor and the user. By all working together for the common good of the industry much can and will be accomplished. The coming conventions and shows are the factors whereby this can be secured. Every man who has the success of the industry at heart should make up his mind to attend these and by working with his co-laborer in the field, solve the great problems which confront the industry.

The principal retarder of business today is the railroad transportation problem. With an annual government appropriation for rivers and harbors commensurate with the needs of the country as demonstrated by our government engineers, we could work out this problem and develop our commercial interests. We do not make sufficient use of our great arteries of commerce, the rivers. With good roads and deep waterways, we would be able to combat the problem of internal shipping upon an economical basis. We would be able to develop our outlets to the coast and make our country one of the greatest factors in the commercial world. We have the brains and the skill and the money. Let us put them all to work solving this great problem.

Did you ever stop to think what it would mean to the individual if our government subsidized our Merchant Marine? Twenty-five cents a year pre capita would make our country dominate the commercial world. It would enable our ships to travel to every section of the universe, and allow our American manufacturers, who overproduce regularly at certain periods, to enter the markets of the world, which would then be open to our shipping interests. We could then regulate our prices better and in fact, be able to maintain them just as the steel manufacturers maintain the prices of their products.

Power & Mining Machinery Co.

MILWAUKEE, WIS. U. S. A.

District Offices: _____

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New York City

Atlanta

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San Francisco

"Half the size,
Half the weight;
Half the height,
Half the freight."

TO WHICH MIGHT ALSO BE ADDED:

"Half the efficiency,
Half the life;
Half the success,
Double the strife."

■ All the above at the same price of a real crusher, too, such as the

"McCULLY CRUSHER"



McCULLY CRUSHERS ARE NOT SOLD BY RHYME BUT BY REASON

By reason of their unequaled capacity and wearing qualities on rock and ore of any degree of hardness, and WITHOUT MELTING ANY BABBITT.

By reason of not requiring pumps for circulating the oil.

By reason of not requiring any cooling system for cooling the oil.

By reason of their unequaled efficiency under any and all conditions of service.

By reason of their unequaled economy due to minimum power, oil and repairs required.

By reason of many other "reasons",—too numerous to mention here, but which are contained in our new Catalog No. 4-R which is just off the press.

DO YOU WANT IT? THEN SEND FOR IT. IT'S FREE.

Principal Products

ROCK CRUSHING MACHINERY

MINING AND SMELTING MACHINERY

CEMENT-MAKING MACHINERY

WOOD IMPREGNATING PLANTS

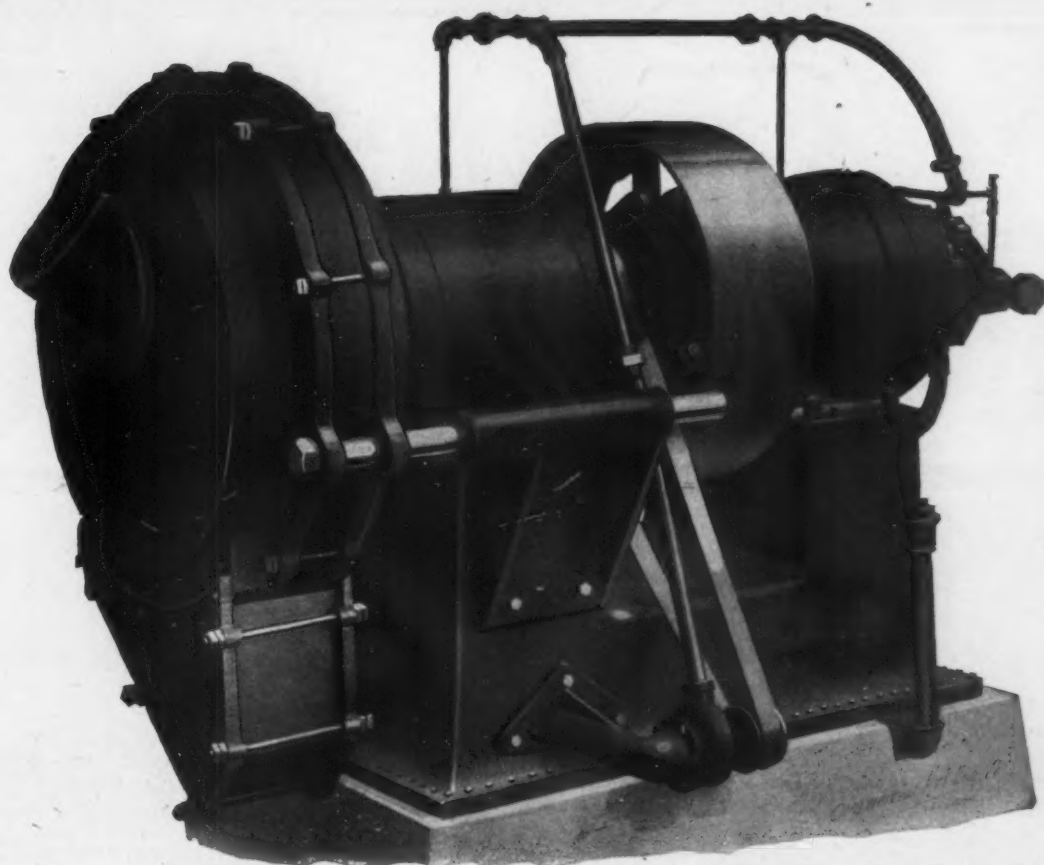
POWER TRANSMITTING MACHINERY

LOOMIS-PETTIBONE GAS GENERATORS

SUCTION GAS PRODUCERS

Write for Catalogs on any of Above, Mentioning this Journal.

Symons Disc Crusher



To Crusher Users:

What SIZES of Crushed Stone SELL Most Readily?

Why not make a specialty of these sizes?

The SYMONS DISC CRUSHER will do your work.

It is adjustable.

It makes any size between 3 inch and 1-4 inch.

It is "at home" crushing gravel, wet or dry.

Send for catalogue.

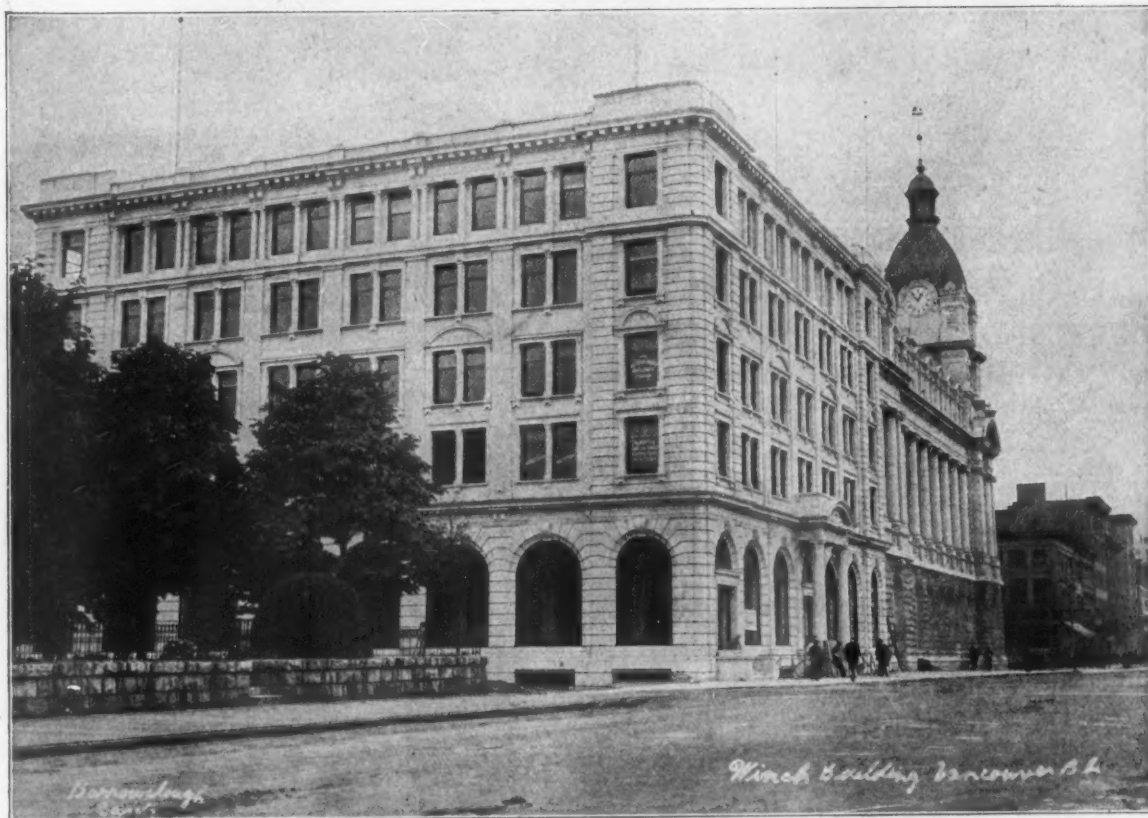
Symons Brothers

605 Majestic Bldg.

MILWAUKEE, WIS.

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Triangle Mesh Concrete Reinforcement



Winch Building, Vancouver, B. C.

Triangle Mesh reinforcement used.

Made by
American Steel & Wire Co.
CHICAGO, NEW YORK, DENVER, SAN FRANCISCO.

WRITE FOR ILLUSTRATED PAMPHLET

United States Steel Products Co., 30 Church St., New York., Export Representatives



HEATH & MILLIGAN

Cement Coating

A practical, tested and guaranteed Waterproofing and Decorative Coating for

Cement, Stone, Brick and Stucco Surfaces
— NOT A PAINT —

Under the management of

F. J. MORSE

who invites co-operation of the architect, contractor and owner.

Look us up at the New York and Chicago Cement Shows.

Our office making a specialty in this line is located at 207 Chamber of Commerce Building, Chicago

HEATH & MILLIGAN MFG. CO. - - CHICAGO, U. S. A.



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Ceresit means 16 years' experience in waterproofing research. Ceresit Paste is added to the water used in mixing mortar or concrete. With the water the Ceresit Paste penetrates to all parts of the concrete or mortar.

Ceresit is now being used for the Harper Memorial Library (Chicago University) which is more than an ordinary waterproofing job. There is a reason why Ceresit is so widely known all over the world. Insist upon Ceresit being specified for your next building.

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Infringements of the Basic Patents for Waterproofing Portland Cement owned, controlled, applied for or in which this Company is interested in the United States or any other country, will be vigorously prosecuted.

PERFECTLY SIMPLE

WATER PROOFING

SIMPLY PERFECT

Compound 7c per Pound, Your R. R. Station

A COPY OF THE REPORTS OF TESTS MADE FOR CRITICAL PURCHASERS
WILL SAVE YOU TIME AND WORRY

A Mixing Machine Loaned Free of Charge with Quantities

McCORMICK WATERPROOF PORTLAND CEMENT CO.

CHICAGO OFFICE: 159-161 Randolph Street

MAIN OFFICE: Bank of Commerce Bldg., ST. LOUIS, MO.

Tell 'em you saw it in ROCK PRODUCTS

DISCOLORED CEMENT SURFACES

Also stone, brick or other masonry, caused by action of the weather or the usual wear, **made to look like new**, doing away with blotches, efflorescence, dusting of floors and giving to the surface a perfect flat finish, waterproof and lasting.

With Symtorex

you can restore an old surface so that it will look like new. **Symentrex** is **not** a lead and oil paint but a coating of which the basis is Portland Cement.

Manufactured in colors. Full information on request.

George W. de Smet

Vulcanite Portland Cement, Dehydratine Waterproof Compounds

419 Chamber of Commerce Bldg.

CHICAGO, ILL.

GLIDDEN'S

AND WATERPROOFINGS

**BIGGEST—BROADEST—BEST LINE—STANDARDS FOR QUALITY AND EFFICIENCY
SPECIFIED AND USED IN THE BIG WORK.**




The Glidden Proposition for 1911 for Builders' Supply Houses

Is Worth While

Let us Tell You Today What Others are Doing With the GLIDDEN Line

**Factories CLEVELAND, OHIO
TORONTO, ONT.**

THE GLIDDEN VARNISH COMPANY

ATLANTA, BOSTON,  Branches
CHICAGO, ST. LOUIS, 
NEW YORK 

CONCRETE FINISHES

Tell 'em you saw it in ROCK PRODUCTS

BAY STATE

BRICK AND CEMENT COATING

as a Protection and Tint for Concrete

This Coating is made of a cement base, held in suspension by a volatile oil which evaporates on application. It contains no lead, is not affected by fumes of acids or gases and can be applied to a damp surface. It becomes a part of the material itself and will not rub, crack, peel, chip off or mildew.

It does not destroy the desirable distinctive texture of concrete.

It can be had in many beautiful shades ranging from pure white to dark green. It may be used as a finish coating for the ornamentation and protection of concrete, cement, stucco, brick or plaster on subways, cellars, mills, hotels, office buildings or small or large homes.

It has been endorsed by the National Board of Fire Underwriters as a fire retarder and will lessen the Insurance rate.

As a floor coating it prevents the powdering of cement floors, making a sanitary application for public buildings, hospitals, schools, libraries, etc. It can be readily washed.

It will not chip or scale off when applied overhead and thus prevents damage to delicate machinery.

Ask your dealer or address for sample card and particulars mentioning this paper.



RAY STATE

WADSWORTH, HOWLAND & CO., Inc.
Paint and Varnish Makers and Lead Corroders
82-84 Washington Street, Boston, Mass.

MITCHELL LIME

Is Chemically Pure and Practically Free from Waste

The Strongest White
Lime on the Market.
Used and recommended
by Sand-Lime Brick
Manufacturers, Chemists,
Soap and Glue Works,
Plasterers and Masons.

Prices Cheerfully Submitted

Mitchell Lime Company
MITCHELL, :: :: :: INDIANA

Frequently We Hear

it said that one or another concern dealing in builders' supplies is a reliable one. Why is a concern reliable? Because its word is good. It handles standard materials. It makes prompt deliveries.

Tiger Brand White Rock Finish

is in the warehouses of most of the reliable builders' supply dealers in 22 States of the Union because it is always uniform in working qualities and strength. It is recognized as the *Standard Finishing Lime*.

May we send you a quotation?

The Kelley Island Lime & Transport Co.
Cleveland, Ohio

MONARCH HYDRATED LIME

Cheaper and Better than LUMP LIME



Its value to you is greater because—

- It costs less to handle—
- It can be thoroughly soaked in 24 hours—
- No screening required—
- Carries more sand—
- Gauges with a third less plaster—
- Spreads further—
- Easier—
- Will not air slack—

You will be a MONARCH MAN if you once try
MONARCH HYDRATED LIME.

[Our prices satisfies. Write us.
"We ship sudden"]

The National Lime & Stone Co.
CAREY, OHIO

Tell 'em you saw it in ROCK PRODUCTS

A. & C. Stone & Lime Co.

General Office: Indianapolis

Crushed Stone and White Lime

Sales Office at each Plant

Greencastle, Ind.

Portland, Ind.

Ridgeville, Ind.

Lime Kilns at Portland, Ind.—Crushers at all 3 Quarries

Write the Plant nearest your Work for Prices

CRUSHED STONE, all sizes, **SCREENINGS CLEAN**

Connections with 6 Railroads

Modern Machinery and Screens



LIME

Rotary Kiln Process, burned with Natural Gas.

Our "Wet Process" hydrate scientifically slaked and cured in large vats, dried, milled and put up in Bates Valve Bags, 40 lbs. each. A perfect product.

The Best Yet Produced.

Lump Lime, car lots.

Dolomite, for Basic flux and furnace uses.

Farnam "Cheshire" Lime Co.

OF CHESHIRE, MASS.

MANUFACTURERS OF THE

Celebrated Cheshire "Finishing" Lime

Well known throughout New York and the Eastern States as the finest finishing lime manufactured. The special feature of this lime is its quick and even slacking, thus preventing any cracking or checking when put on the wall. It is the best lime used in the country today for all

HIGH GRADE FINISHING WORK

Selling Department, 39 Cortlandt St., N. Y., C. J. CURTIN, Pres't.

Banner Hydrate Lime

HIGH MAGNESIA FINISHING LIME

Manufactured by the

National Mortar & Supply Company

Office at Pittsburgh, Pa.

Works at Gibsonburg, Ohio

Enlarged capacity

Tell 'em you saw it in ROCK PRODUCTS

The Ohio and Western Lime Company

WORKS AT

Huntington, Indiana
Marion, O.
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Fostoria, Ohio
Sugar Ridge, Ohio
Tiffin, Ohio
Genoa, O.
Limestone, Ohio
Lime City, Ohio
Portage, Ohio
Luckey, Ohio
Bedford, Ind.

MANUFACTURERS OF AND WHOLESALE DEALERS IN

Ohio and Indiana White Finishing Lime, Ground
Lime, Lump Lime, Fertilizer, Hydrate Lime,
Cement, Plaster, Hair, Etc., Etc.

Capacity
8000 Barrels
Per Day

MAIN OFFICE: Huntington, Ind. Branch Offices: Marion, Ohio.

"IF IT IS

LIME

WE MAKE IT"

Lump - Barreled - Hydrated - Ground
STRONGEST IN OHIO.

We are not connected with any Trust or Combination.

WRITE US
PHONE US

The Scioto Lime and Stone Company, Delaware, Ohio

CROWN HYDRATE

HIGH CALCIUM HYDRATED LIME

At present prices you can waterproof, improve the color and strengthen the texture of all cement construction and actually **save money**, because the Hydrate **replaces** the same amount of cement (15 to 25%).

Kritzer Vacuum Process

MARBLEHEAD LIME COMPANY

KANSAS CITY

CHICAGO

GLENCOE LIME AND CEMENT CO.

MANUFACTURES LIME AND LIME-STONE FOR FLUXING

DEALERS IN Lime, Cement, Plaster, Hair, Etc.

915 Olive Street

ST. LOUIS, MISSOURI

In the Southeast

are advantageously located deposits of Cement Rock, Shales, Clays, Fine Kaolins, Sands, Marbles, Granites, Limestones and other Building Stones awaiting development. The Southeastern States are growing more rapidly than any other section, and unsurpassed opportunities are found in them. The Southern Railway, Mobile & Ohio Railroad, Georgia Southern & Florida Railway and Virginia & Southwestern Railway give shipping facilities to all portions of the country.

M. V. Richards, Land and Industrial Agent
1370 Pennsylvania Ave., Washington, D. C.

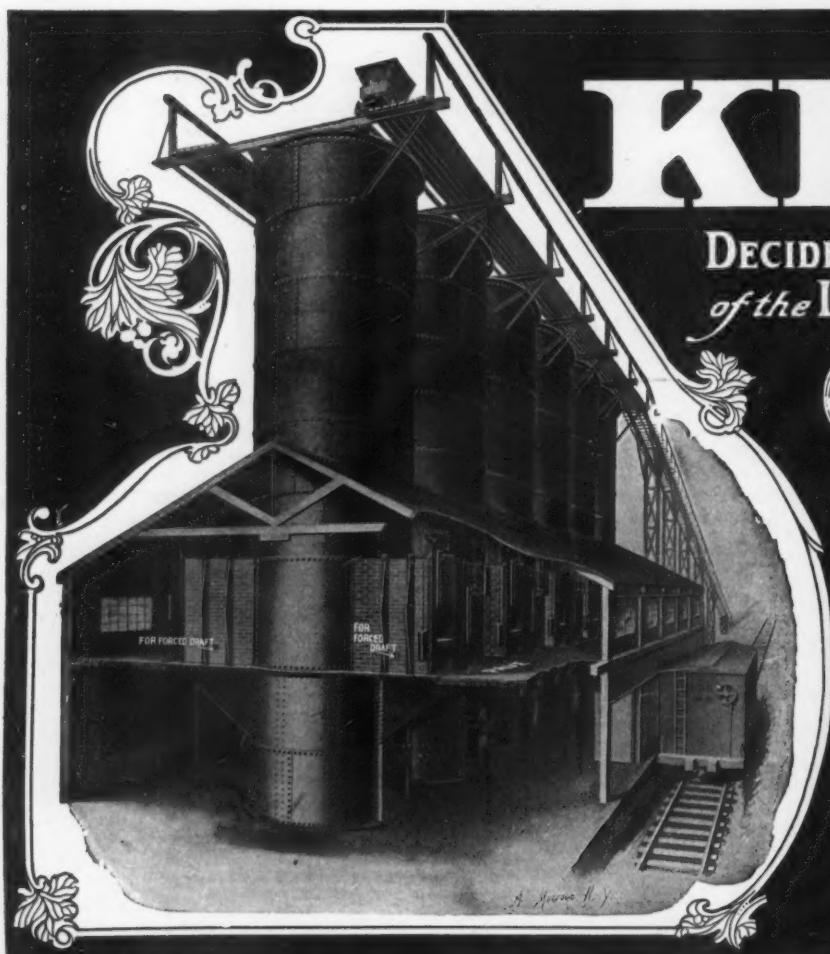
FOWLER & PAY

Brown Hydraulic Lime, Austin Hydraulic
Cement, Jasper Wall Plaster, Brick, Stone

CEMENT WORKS: Austin, Minn.
PLASTER MILL: Ft. Dodge, Iowa
WAREHOUSE: Minnesota, Transfer

MANKATO, MINN.

Tell 'em you saw it in ROCK PRODUCTS



KILNS

DECIDE *the* EARNING CAPACITY *of the* LIME MANUFACTURING PLANT

THE KEYSTONE LIME KILNS

*are famous money makers
and express the highest type
of modern developement.
There's none quite so good,
and the price is right.*

**FULL PARTICULARS
WILL BE CHEERFULLY FURNISHED**

STEACY-SCHMIDT
MANUFACTURING CO.
YORK · PENNA

The Bradley Producer

Gas Process for Burning Lime.

Four and three-quarter pounds of lime to one pound of coal on a large output is now being secured every day.

Does that look like economy to you?

RESULTS GUARANTEED

Duff Patents Company **Frick Building**
Pittsburg, Pa.

Tell 'em you saw it in ROCK PRODUCTS

Hydrated Lime

Bulletin No. 37

Hydrated lime is comparatively new, consequently it encounters many skeptics and some adverse criticism. But so does everything else. Not so many years ago it was the common belief that Portland cement, as good as that produced abroad, couldn't be made in this country. We all know now how foolish that belief was. But Hydrated Lime is coming to the front rapidly and making just as much progress as Portland cement did. However, you may say, "Well I tried some hydrated lime and it didn't work out, but the scheme of selling slaked lime is all right if it can be made right." The foregoing is a good criticism of the hydrated lime industry up to the present time but it is no disgrace. Every manufactured article has to make a start and most of them make several false starts before all the facts in the case are worked out, and hydrated lime is no exception.

However most of the difficulties of manufacture have been overcome and hydrated lime can be made now as it should be and the progressive manufacturers are doing it.

Of what benefit now is hydrated lime to the dealer and what advantage has it over quicklime? This query covers a broad field and much could be written, so perhaps a brief discussion will not be out of place here. As a general statement it can be said that hydrated lime possesses the good qualities of quicklime without its drawbacks. In other words, properly prepared hydrated lime is all lime putty, with all the overburned particles, grit, stone, air slacked lime, etc., removed in process of manufacture. Hence hydrated lime can be purchased in quantity, thus securing a better price, and the dealer takes no risk of losing anything on the transaction as he buys only powdered lime putty which he can keep indefinitely.

Further, hydrated lime will always do a satisfactory job. In plastering there is no possibility of "pitting" and "popping", as the impurities that caused this have been removed in process of manufacture. In brick work quite an expense is saved in the cost of making mortar by the elimination of the labor of slacking. The mortar can be made, tempered and carried to the wall by the same man.

And finally to the dealer who handles and pushes hydrated lime a much broader business field is opened. For instance, in the domestic uses alone hydrated lime can be sold where quicklime would be impossible; as dry dusting in poultry houses; making tree sprays accurately and quickly; making prepared white washes; disinfectants; cleaning powders, and numbers of other products.

Our business is the designing and constructing of Hydrating plants. To make this up-to-date material, we have the only process that has proved successful in hydrating a High Calcium and Dolomite limes.

It requires about three to four months to build a plant; why not take this matter up with us now and get ready for business?

When small per cents of hydrated lime are added to concrete it is an advantage in a number of ways:

- (1) The concrete works easier under the trowel. It finishes easier.
- (2) It prevents drying out as quickly as it otherwise does.
- (3) It improves the color of the finished work.
- (4) It makes the concrete more impervious to water.
- (5) It improves the strength.

When small per cents, say 10 to 25 per cent, is added and well mixed the finely divided, flaky nature of the Hydrate reaches every part of the mass. On account of its lightness it follows the tendency of the moisture to work to the surface. In so doing the granular particles becomes coated with thin film of Hydrate and the mass offers less resistance to the workman's tools. Mixing is therefore easier. When the finish coat is put on the same is true, and by the time this is well worked in place there is sufficient Hydrate present at surface to make floating and troweling easier. The finisher can do this important work much faster and easier.

The people of the United States are large users of lime and will be larger users when it is made easier to handle and more attractive to the consumer than as it is now being offered.

So, then, there are three factors which speak for hydrated lime and which are bound to make its use increase and the wise and progressive dealers will recognize them, viz:

1. The risk of loss incident to the handling of lime with hydrated lime is reduced to a minimum. Right here is a profit to the dealer in hydrated lime that the man who refuses to handle it doesn't enjoy.

2. A more satisfactory product is offered to the trade and complaints and allowances to contractors are eliminated. Here is more money which ordinarily is figured by the dealer as profit when he sells the lime, but which he usually doesn't realize when the contractor pays his bill.

3. A broader market is offered and a steadier all around business can be enjoyed as well as a wider range of trade reached.

Now with these three factors in its favor can any one conceive of the possibility of hydrated lime not succeeding and being more and more used every year? Impossible! And lime dealers must ride along with the ever-increasing demand, for it will never be stopped or turned back.

Hydrated lime has revolutionized the lime business for the consumer and the dealer as well. The consumer has recognized the advantages of hydrated lime and responded and it is up to you, Mr. Dealer, to furnish what your trade wants and incidentally reap the benefit of an increased margin of profit which after all is what we are in business for.

[DEALERS RECORD.]

The Kritzer Company
115 Adams Street CHICAGO, ILLINOIS

Tell 'em you saw it in ROCK PRODUCTS

Mr. Lime Manufacturer:

Q Do you know that every lime plant that employs the BATES SYSTEM of bagging their lime is doing it at a LESS COST than you do if you do not employ that SYSTEM? IT'S A FACT.

**Our lime, cement and plaster sacks
are giving universal satisfaction.
We GUARANTEE the quality.**

The Urschel-Bates Valve Bag Co. TOLEDO, OHIO

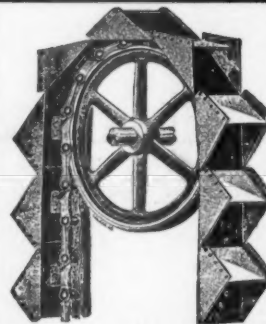
GOOD ROADS CONSTRUCTION CO.

General Offices, Byrd Bldg., Memphis, Tenn.

Our Quarry Facilities are of the Best.

We build municipal street work, turnpikes and give attention to all construction work of a similar character. Our organization is backed by twenty-five years experience, and we are in a position to furnish specifications and estimates promptly. Individuals, Corporations or Municipal authorities are invited to correspond with us.

**For Bargains
See our Classified Section
Pages 56-57**



Send for Catalog 25



**THE GENERAL CRUSHED
STONE CO.,**

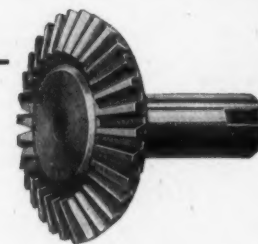
So. Bethlehem, Pennsylvania,

have been using one of our **Common Sense Elevators** for six years—
capacity 400 tons an hour.

THE C. O. BARTLETT & SNOW CO. CLEVELAND OHIO.

Remember—

If it isn't a Nuttall,
it isn't the best gear
money can buy.



Nuttall—Pittsburg

When in a hurry, wire vs.

Whenever you wish to

**SELL YOUR STOCK, to
DISPOSE OF YOUR
OLD MACHINERY,
WISH AN EMPLOYEE, or
WANT A POSITION,**

REMEMBER that ROCK PRODUCTS can do this for you promptly.



Wade Iron Sanitary Mfg. Co.

MANUFACTURER OF

Wade Back Water Gate Valves, Clean-Out House Drainage Fittings, Iron Catch Basins and Cast Iron Covers, Etc.

Send for Catalogue.

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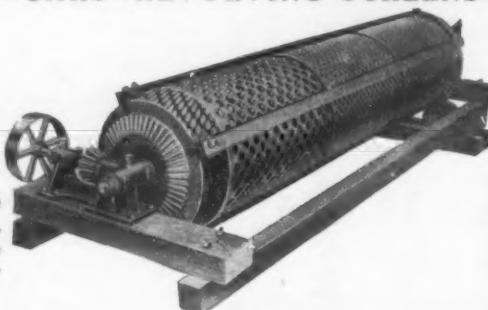
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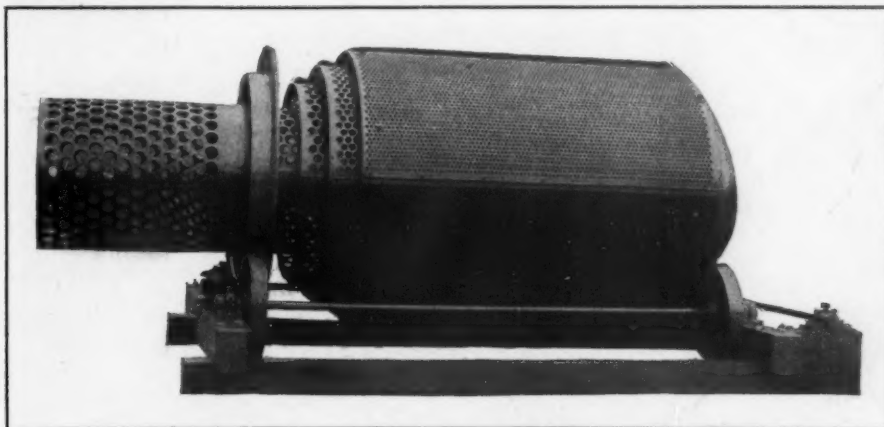
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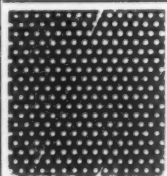
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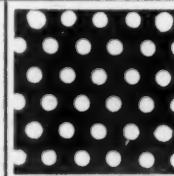
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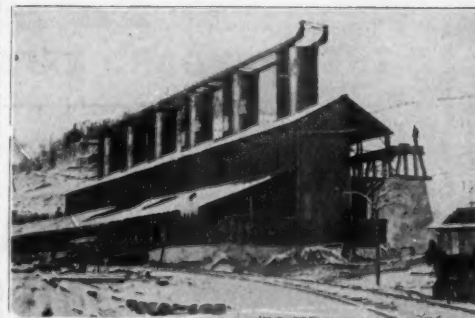
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DEVOTED TO CONCRETE AND MANUFACTURED BUILDING MATERIALS.

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EDITORIAL DEPARTMENT DURING NEW YORK CEMENT SHOW.

Imperial Hotel, 32nd and Broadway.

Section 131 Madison St. Entrance, Madison Square Garden.

Communications on subjects of interest to any branch of the stone industry are solicited and will be paid for if available.

Every reader is invited to make the office of Rock Products his headquarters while in Chicago. Editorial and advertising copy should reach this office at least five days preceding publication date.

TERMS OF ANNUAL SUBSCRIPTION.

In the United States and Possessions and Mexico.....\$1.00
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Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option.
Advertising rates furnished on application.

Entered as second-class matter July 2, 1907, at the Postoffice at Chicago, Illinois, under Act of March 3, 1879.

The election is over. Let's get busy.

Look out for the Cement Show daily.

The sand lime brick manufacturers are going to hold a convention next month at Detroit. Are you one of them? If so, get busy.

ROCK PRODUCTS' headquarters in New York during the Cement Show will be at the Hotel Imperial, Broadway and Thirty-second streets. Make it your headquarters also.

At the solicitation of our friends in the trade, we are printing at the cement shows our Daily Rock Products, which will not only be distributed to every one that visits these shows, but to the people interested in the trade, so that it will secure greater publicity than the attendance of these shows, and thus place the cement industry in closer touch with the aggressive movements of the individuals in the building trades.

The Association of American Portland Cement Manufacturers will hold their annual convention at the Hotel Astor, New York City, December 12 to 14, or just prior to the opening of the Cement Show at Madison Square Garden.

This will, no doubt, be a very important meeting, as there are many vital topics to be considered, and it is expected that representatives of every concern in this country manufacturing cement will be present.

The Seventh Annual Convention of the National Association of Cement Users will be held this year in Madison Square Garden during the week of the Cement Show. The tentative program, which is printed on another page in this issue, shows that careful thought has been given to the selection of the men who are to deliver the principal addresses and papers. The subjects comprise practically every phase of the cement business and the list of speakers are among the brightest men in the business. As the railroads have given special rates, there is every reason to believe that the attendance will be a record breaker.

Thanksgiving is close at hand. We have much to be thankful for. This country is in a more prosperous condition today than ever before. The manufacturer and the dealer in building materials has had a prosperous year, which is now drawing to a close with the coming of the unseasonable weather conditions.

Now that all the crop reports are in, it can be readily seen that the annual crop scares and talk about poor crops is but the idle vamping of a coterie of gamblers, and, after all, this great country is going along in the same old way, producing greater and larger crops every year and doing more building than ever before.

Instead of giving thanks once a year, we should give thanks every day that we are part and parcel of this great and glorious United States.

ROCK PRODUCTS will be represented in the East by Ralph Peverley, who has been for many years connected with the cement industry, even from its earliest days. He is well known to the trade and was a friend of ROCK PRODUCTS when he was in the business. He has our confidence and we bespeak for him the hearty co-operation which has been extended to the editors and representatives of ROCK PRODUCTS in the past.

Our eastern office is at Room 500, 110 West 34th Street, New York City, where we will always be glad to see our friends. This addition to our staff was brought about in order to give the Eastern trade closer co-operation, for it has always been the object of ROCK PRODUCTS to intelligently wrestle with the problems of the business and co-operate for the greater prosperity of the craft.

The Twelfth Annual Convention of the National Builders' Supply Association will be held in Chicago, February 21 and 22, 1911, at the Hotel Congress Annex.

This organization has been a great power for good in the past, and it has enrolled in its membership the leading retailers of supplies throughout the country. The importance of this meeting can hardly be overestimated, nor can the good to be accomplished, if every retailer of supplies were to put his shoulder to the wheel. Strange as it may seem, there are a number of retailers who do not belong to this organization. That they should be so blind to their own interests is past comprehension. Let every retailer make up his mind to send in his application between now and the meeting at Chicago and arrange his dates so that he can be on hand for that occasion.

The eyes of the construction world will be centered on New York next month. Everyone interested in cement from the manufacturer of the material to the user of the same will find something to interest him at the coming conventions.

Preparations have been made on a vast scale for the housing of the cement exhibits in Madison Square Garden. It will be the first time that concrete will be employed in the making of the booths, and this, the first show of any magnitude held in the East, will be in reality the first Cement Show. Profiting by the experience gained by the Cement Shows in Chicago, the Cement Products Exhibition Company have eliminated, to a large extent, undesirable exhibits, and have interested the leading manufacturers of cement and machinery, as well as the workers themselves, with the result that the coming show will be as comprehensive an exhibition of cement products as it is possible to get together under one roof.

The floor space in Madison Square Garden is not so large as that utilized at the Coliseum in Chicago, and for that reason the show will be more compact, which will be an advantage to those who attend, since it will not require such great exertion for those who visit the exhibits. Sousa's Band will be in attendance at the show, which will be a source of attraction to all visitors.

EDITORIAL CHAT

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COMING CONVENTIONS.

November 25-26—Lakes-to-the-Gulf Deep Waterway Association. St. Louis, Mo.

December 6-7—Seventh Annual Convention of the American Association of Manufacturers of Sand-Lime products. Detroit, Mich.

December 7-8—American Society of Mechanical Engineers. New York City.

December 7-9—National Rivers and Harbors Congress. New Willard Hotel, Washington, D. C.

December 12-14—Association of American Portland Cement Manufacturers. New York City.

December 14-20—Seventh Annual Convention of the National Association of Cement Users. Madison Square Garden, New York City.

December 14-20—First Annual Cement Show. Madison Square Garden, New York City.

January 10-13—Seventh Annual Convention and Show of the Iowa Association of Cement Users, Cedar Rapids, Iowa.

January 11-12—Retail Lumber Dealers' Association of Indiana, Indianapolis, Ind.

January 19-20—Nebraska Lumber Dealers' Association, Rome Hotel, Omaha, Neb.

January 25-26—Retail Lumber Dealers' Association of the State of New York, Onondaga Hotel, Syracuse, N. Y.

January 25-27—Southwestern Lumbermen's Association, Kansas City, Mo.

February 1-3—Mid-West Cement Exposition, Omaha, Neb.

February 14-16—Illinois Lumber Dealers' and Masons' Supply Association. Chicago, Ill.

February 14-17—Thirteenth Annual Meeting of the American Ceramic Society. Trenton, N. Y.

February 17-23—Fourth Annual Cement Show. Coliseum, Chicago, Ill.

February 21-22—Twelfth Annual Convention of the National Builders' Supply Association, Chicago, Ill.

The real power behind the throne, the unseen force which has made the Chicago Cement Shows of the past a possibility, and which is going to make the New York Show a brilliant success, is Edward M. Hagar, the president of the Universal Portland Cement Company. He is an indefatigable worker, a genius for organization, a man of brilliant ideas and has the power and strength to carry them through.

In looking over the list of exhibitors at the coming Cement Show there are many familiar names. In fact it would not seem like a cement show at all were they missing. Still here and there one has dropped out of the running, the gap being filled immediately by others. It is a survival of the fittest, as it has always been since the beginning of man.

C. C. Wayland, secretary of the Badger Portland Cement Company, has announced that he will remove his offices from Appleton to Milwaukee. The Appleton offices will be occupied by the Appleton Pulp Wood & Supply Company.

G. A. Duke, cement salesman, is quoted as saying there are two ways of telling whether a city is making any progress. "One is the use of cement and the other is the use of electricity." Outside of St. Louis, Kansas City and St. Joseph, Springfield is using by far the largest quantity of cement of any city in Missouri, and therefore its citizens claim that it is decidedly a live town.

Our old friend, A. Baumberger, now with the Cape Girardeau Portland Cement Company, says he will be on hand at the Cement Show to be held in Chicago in February and will give a "Swanee." He says he is going to make his sanctimonious young friend, Bert Swett, master of ceremonies. There will certainly be something doing when these two live wires get together.

Walter Brinton, superintendent of the manganese steel department of the Taylor Iron & Steel Company's plant at High Bridge, N. J., since 1895, has resigned, and has accepted a position as consulting engineer for the Edgar Allen American Manganese Steel Company, who are manufacturing manganese steel at Chicago Heights, Ill., and at New Castle, Del. Mr. Brinton's headquarters will be at the New Castle plant.

F. G. Bolles, commercial engineer of the Allis-Chalmers Company, has resigned in order to devote his entire attention to the Reliance Engineering & Equipment Company, 1417-19 Majestic Building, Milwaukee, in which he has an equal interest with C. A. Tupper and others.

The company, which is taking on a number of additional exclusive agencies, will remove December 1 to offices 415, 416 and 417 Engineering Building, and considerably enlarge the scope of its operations.

J. P. Beck, the active man in charge of the Cement Shows, has had the brunt of the active management, and to him no little credit is due for the mastering of the elaborate details in connection with the coming show at Madison Square Garden in New York. With the experience gained at the Chicago Shows as a basis, he has evolved or conceived a scheme of decoration which stamps him as little short of a genius in the handling and placing of the various exhibits. Mr. Beck, although youthful in appearance, is old in point of experience, having handled the biggest Cement Shows that have been handled thus far. He retains his urbane smile and calm exterior throughout all the trying experiences of organizing and managing the shows.

ROCK PRODUCTS is really the father of the New York cement show, as long before it was thought possible or practicable, it was spoken of in these columns. That the show will be a big success goes without saying. It is a long-deferred step in the right direction and will do the industry at large more real substantial good than any one thing which has happened in the industry before. Record-breaking crowds are predicted, as the easterners are in a receptive mood and are willing to be shown.

L. V. Thayer, of Peerless cement brick machine fame, will be at the New York show. Lew will pull off a few stunts calculated to make even the blase old times sit up and take notice.

The cement companies are vying with each other to see who can have the most elaborate display at the Cement Show in New York. Wait till you see them, they'll open your eyes.

While the birth of the cement industry was in the East, it has really seen its greatest development in the

West. The coming together of the East and the West at the New York show will be watched with interest. Some say the easterners are too conservative, while others say the westerner has overstepped the mark. The coming together of all the interests will do much toward putting the industry on a much sounder footing.

We expect to see Charley Bradley, of Rock Rapids, Iowa, at the New York show. Charley is one of the old-timers whose machine seems to improve with age, and no cement show would be complete without him.

SHARING COST OF FIRES.

The rapid growth of American cities during the past few decades and consequent increasing danger from fire has naturally contributed greatly to the advancement of concrete construction. It is interesting to note, in connection with this, how the insurance experts regard the matter of better buildings. The following article was published in a recent issue of the Chicago Evening Post:

DECLARES EVERYONE SHARES FIRES' COST

Insurance Expert Says "Conflagration Habit" Is Expensive to Consumers of Every Kind and Degree.

UNDERWRITERS NOT ALONE

"The man of the street still believes the cost of fires comes out of the coffers of the insurance companies," said Franklin H. Wentworth of Boston, addressing the Fire Underwriters' Association of the Northwest at the Hotel La Salle today.

"If we could go around to the people each year and say to each head of a family, 'Here, give me your check for \$15 for your share in the national carelessness,' it might make an impression on his mind. He does not seem to realize that everything he puts, everything he wears, everything he puts into his house bears the fire tax. We have got to bore this into his thick skull and make him understand this."

"The merchants are beginning to understand the situation, but the man of the street has no idea what it means, and so he goes around throwing his matches here and there with utter carelessness."

"This conflagration habit is what makes scientific underwriting impossible. We've got to teach the people to build better. We must abolish as a public crime the use of wooden shingles."

Mr. Wentworth showed that Chicago's annual fire loss is \$5,000,000, and its fire department costs over \$3,000,000. Berlin has an annual fire loss of less than \$175,000, and its fire department costs a little over \$300,000 a year.

SEVENTH CONVENTION OF THE NATIONAL RIVERS AND HARBORS CONGRESS.

The seventh annual convention of the National Rivers and Harbors Congress will be held in Washington, D. C., December 7-9, at the New Willard Hotel. This congress advocates a waterway policy, not a waterway project.

Rapid strides in commerce demand that our waterways be improved and put into condition, so they can bear their full share of transportation burdens. This meeting will be for the purpose of trying to get a governmental policy to insure this result. Plans for an entertaining, as well as instructive program, have been arranged. The principal and opening address will be given by President William Howard Taft. Other speakers have been secured.

The Election is Over—Let's Get Busy

Now that the election is over, let's get busy. Let us put politics aside for a while and stop talking about elections and get down to earth again. One would think from the amount of talk that goes on every time the country undergoes the throes of an election period that we were a nation of politicians. One of the first things that strikes a foreigner, visiting in this country, is the fact that we are just going to have an election or just getting over one, and he is impressed with the idea that we haven't time to do very much else.

As a matter of fact, elections are a necessary evil and we must have them, but don't let us get carried away with the idea that politics is the panacea for any of the business evils or that a change of politics will help business along. For, as a matter of fact, it has very little to do with the real business of the country, after all is said. The majority of the people in this country are very little affected, one way or the other. The main trouble lies in the minds of most of the people who, fearing trouble, come to believe it themselves, and believing it, act accordingly.

What this country needs is less politics and fewer politicians.

There is nothing really the matter with the country. It is all in our minds.

All we have to do is to stop talking and stop thinking about it and the rest will be easy.

We are printing herewith a number of expressions of opinion from the leaders in the trade, showing that politics doesn't cut very much figure after all.

Milwaukee Not Looking for Sympathy.

From Charles Weiler, treasurer of the Western Lime & Cement Company, of Milwaukee, Wis., we have the following characteristic statement:

Some years ago I was induced to go out to the prairie country of South Dakota with a party of friends who were enthusiastic chicken hunters, and although I had never shot a gun, nor cared to, I went along for company, and a little recreation. Our private car stopped on a sidetrack away out on a lonesome prairie, and I was equipped with an old shotgun and a worthless dog, and turned loose to enjoy myself. After walking a few miles I saw a farmer on a harvesting machine, and hurried over to him and walked alongside the machine, talking to the farmer with real delight about country and crops, and his very interesting harvester, when suddenly, loud above the rattle of the machinery, with a whirling rush of wings, up from in front of the knives sprang a big beautiful prairie chicken, the first I had ever seen! The farmer quickly stopped his horses for me to fire at it, and turned, to see me looking admiringly at the flying bird, and then he shouted at me, "Here—what's the matter with you! Why the hell don't you shoot?" In a bewildered way I made an involuntary motion to hand the gun over, which the farmer seized hurriedly brought it to an aim, and pulled the trigger! There was a slight click—and that was all, and the bird disappeared in the distance! Then the farmer looked at me, and then at the gun, and then he slowly and confusedly said: "And the damned thing ain't even loaded! Say! Mister! What kind of a damned-fool hunter are you, anyway!"

And here you come, my dear Defebaugh, and ask me for an expression about the season's trade and the outlook for the future, and I am not even loaded! Business has been good during 1910, and I am not going to indulge now in my customary pessimistic growl that we are going to sail into a period of tornadoes, and cyclones, and monsoons, and typhoons, and everything going to the demitition bow-wow, for I have an underlying confidence that the country is safe and sound, and that we shall all plunge into 1911 and come out on the other shore with about the usual cargo of profits safely stowed away in the lockers.

The ship of state has taken on a new crew, and, while I don't like all of them, I believe the democrats are all patriots (better patriots than some republicans I might name, but think I had better keep my mouth shut) and I feel serenely confident they will manage our public affairs with an honest intention to do the right thing, at the right time, and they have my best wishes!

If there is any place where a responsible business man should feel uneasiness about political interference with personal rights, it would seem to be right here in socialist Milwaukee, but hoo! and horns are conspicuous by their absence, and I haven't learned, so far, that our socialists have harmed anyone. They are simply a compact minority, who have deservedly won out over a discontented republican and a spineless democratic party, and we all know that when we get ready to unite, our socialist friends will be escorted around to a back seat and jammed down so hard that they they will all have black and blue spots, which they can only see with a hand-mirror.

meantime, Milwaukee needs no sympathy, thank you! The socialist municipal administration can be copied to his glorious advantage by many Godly towns in the far East. Black as we are all apt to paint the other party, it is an astonishing truth that, when you wash the war paint off their faces, they all look just like the rest of us, and no one will raise a hand to hurt our beloved country, the

golden land of opportunity, the shining leader of the world's progress, the best and grandest country in all God's great universe!

1911 a Record Breaker.

Sales Manager Fred E. Paulson, of the Lehigh Portland Cement Company, Indianapolis, Ind., sends in this gem:

It certainly seems good to hear from you once again. The writer has just returned from the Sunny South and the indications certainly point toward a record breaker for 1911, at least everyone seems inclined to think so.

The politicians may juggle to their hearts' content but they cannot stop the progress that was started a couple of years ago.

As far as I can see at this time it seems to me that every mill in the country will be taxed to its utmost capacity for the coming year. The past year has also been a good one. You know what our capacity is, and I am glad to say now that the season is practically over that our floors are clean.

Politics Demoralizing.

C. B. Samuel, treasurer and manager of the Look-out Paint Manufacturing Company, Chattanooga, Tenn., writes us as follows:

In reply to your communication of the 17th, wish to say that the demoralizing effects of politics have been felt very keenly in this section, but we are pleased to state that thus far in the month of November we have done about five times as much business as in the same month of last year. While business is not all that we would desire it to be, yet we feel gratified over the year's business and hope that with the combined efforts of yourselves and all of the remainder of the business world, we may now proceed to boost things for the coming year.

The outlook for business in the southern states for the coming year is very good, and we are hoping that nothing will arise to mar the bright prospects.

Enclosed you will please find check to cover subscription to Rock Products for a year.

Wishing you splendid success in your endeavor to boost, we are,

Good Trade Entire Season.

The Wolverine Portland Cement Company, Coldwater, Mich., states:

Replying to yours of the 17th instant in reference to our season's business, we have had a good trade during

the entire season and it has kept up right up to date. While there has been very little large construction work in our territory we have increased our sales to the country trade very materially. If there had been lots of railroad and municipal work during the past year there would have been an extraordinary shortage of cement.

Politics Not a Panacea.

J. H. Zim, of the William E. Dee Clay Manufacturing Company, Indianapolis, Ind., writes:

Don't know how it is in other lines of business, but among the building trades any man will be ridiculed who dares express a preference for any political party as a panacea for dull business.

High prices of material don't always make a decrease in building operations, neither do low prices stimulate building. Outside of, say lumber, sales of building material, such as lime, cement and clay products, could not be increased if all the factories would sell at actual cost during next twelve months. On the other hand, if these same factories would all sell at a good, fair profit, the total output for next twelve months would be just as great as if they would demoralize prices. The sewer pipe factories in Ohio have been selling at ruinously low prices for the past year, yet their total output has not exceeded former years, when they got good prices.

Moral: Don't cut prices.

No Complaint to Make.

A letter received from Wadsworth, Howland Co., Boston, Mass., states:

Your letter received and contents noted. In a way our goods are not building materials but are paints, painters' supplies and varnishes. The product which we advertise in your publication is Bay State Brick and Cement Coating, which is the first material of its kind ever made in this country and we can state without egotism that it is the best product on the market today by far.

We have no complaint to make with the amount of business we have done with this cement coating, but we do complain bitterly in regard to the profits we have made, which have been very, very small, owing to the excessive high price of raw materials.

The writer is optimistic for the future, but at the same time hardly thinks that we will have a boom until after our national election. Owing to the upheaval all along the line it would tend to make business lack the ability it should have to make it active. However, our wonderful country is sure to go higher and higher still in the commercial world, and let all of us get busy.



THE ELECTION IS OVER. LET'S PUT THE POLITICIANS ON ICE.

Very Healthy Condition.

C. F. Harwood, sales manager of the Superior Portland Cement Company, Cincinnati, O., sends us the following:

Business in our territory is in very healthy condition at this time and we are very much encouraged as far as next season is concerned. What few contracts we have taken for next season delivery carry a much better price than the prices which prevailed last year at this time or during the early part of this season.

As you know, this is also the office of the Smokeless Fuel Company. While this season is probably well over in the cement business this is not the case in the coal business. Since the election conditions in the coal trade are much better, we are enjoying increased business and are entirely satisfied with present conditions. We feel very confident that the cement mills will not find it possible to take care of all of the orders which will be offered them this next season.

More Business—Less Politics.

B. E. Allison, traffic manager of the United Kansas Portland Cement Company, who will be with the Choctaw Portland Cement Company at Oklahoma City after the first of January, writes as follows:

I have yours of Nov. 17th, regarding business, and think you have sounded the key-note in your remark about politics affecting business.

To paraphrase our old friend, Mollie Lease, of Kansas, I think that the country should go to raising more business and less politics.

After this remark, it is needless for me to say that I am neither an insurgent or a progressive. On the other hand, I am going to be conservative even at the risk of being called an old fogey, a reactionary, or a standpatter.

For my part, I hope that politicians and politics will permit us to forget them for a brief season.

Looks for Quiet Business.

Henry W. Classen, of the Maryland Lime & Cement Company, Baltimore, Md., writes ROCK PRODUCTS as follows:

I have yours of the 17th and note that you state you have run across several fellows who report orders coming in very satisfactorily since the election, and feel very good for the prospects for next year's business, and in reply would state that we are not in the same position. We look for two or three years of rather quiet business in this city, as there has been a large number of two and three story dwelling houses erected in the past five or six years. A great many of these are idle, in addition to other idle houses throughout the city. This will mean that very few houses of this class will be erected next year, and although we did not solicit this class of trade, the dealers who looked after the same will have to look to a new field next year for placing their goods, which will mean a fight for business for the legitimate buildings.

Got What Was Coming to Us.

Vice President F. S. Wright, of the Meacham & Wright Company, Chicago, Ill., writes:

Replying to your valued favor of the 17th inst. touching on the recent political upheaval, and asking our opinion of the possible effects on trade in our line received. With us trade never was better than during the

past year. We cannot see that the landslide will or can injure the very bright prospects for a continuation of same during the year 1911. Don't you think we got pretty nearly what was coming to us? The writer is of the opinion the democratic party has nothing to get hilarious over. Others than democrats voted the last election.

Demand Better Than Ever.

The Union Mining Company, of Baltimore, Md., writes:

Whether the result of the election or not, the demand from the builders' supply houses for our fire brick is better at this time than at any other period in the history of our company. This same condition exists in the demand of the lime manufacturers for our fire brick for use in their lime kilns. These are the two lines in which your readers would be interested, but like conditions prevail in many other manufacturing lines.

In substantiation of the above, we would state that the volume of orders received by us to date for the month of November is a fraction over 22 per cent greater than for the same period of 1909, and, from every standpoint, 1910 will be a banner year for the Union Mining Company.

Ahead of Last Year.

A. B. Keefort & Co., Indianapolis proprietors of the Anchor Marblehead Lime Works and dealers in all kinds of building materials, write that they have had a good business all the season. The demand for Portland cement on construction work has been good, with fair profits to the dealer. In fact their business up to this time is 10 per cent ahead of 1909, and that was the best year they had ever had. "There is no room for the 'calamity howler' down here. Go after what you want and get it," is the way they sum up the situation.

Increased Activity.

A letter from B. W. Ransom, manager of sales for the General Fireproofing Company, Youngstown, Ohio, makes the following comment:

Referring to business conditions, we are frank to say that while, up to the present month, business was exceedingly good with us, it has fallen off considerably in the last thirty days, but we believe we can notice increased activity since the election is over, and everything points to a very prosperous business for 1911.

MEETING OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS.

The annual meeting of the American Society of Mechanical Engineers will be held at New York City December 7-9, inclusive. A paper on the rotary kiln, by Ellis Soper, of Detroit, will be presented, and following this an illustrated lecture on the Panama Canal will be given by Charles W. Baker, editor of "Engineering News." Mr. Soper's paper will discuss the use of the rotary kiln in the burning of Portland cement.

LAKES-TO-THE-GULF.

Deep Waterway Convention Will Be Held in St. Louis This Week and Plans Will Be Perfected for Starting the Great Work.

The fifth annual convention of the Lakes-to-the-Gulf Deep Waterway Association will be held in St. Louis on Friday and Saturday, November 25-26. Although there have been four previous meetings, very little real work toward the end the association has in view has been accomplished. This fifth convention is to be for the purpose of exchanging felicitations on the work thus far finished and to prepare for execution comprehensive plans for starting the work on a broad, efficient scale that will work wonders.

At the initial meeting in 1906 the organization work took place, and at the other three meetings, attended by large numbers of delegates, very little was done except talk and advance plans. Enough people, for practically everyone interested in transportation desires this waterway, are clamoring the year round for cheaper rates and better shipping facilities, and these are the ones to push the project ahead. The need for a through water route from the Great Lakes to the Gulf has long been realized. The benefits this waterway would bring to shippers are many. In the first place, the rates would be so low that the railroads would have to reduce their freight charges or withdraw from competition. And again, there are many shippers located in such a manner that the railroad facilities are of no use to them. These shippers would be included in the benefits of the through water route.

The illustration shown herewith is of the whole Mississippi Valley. The short black line from Chicago to Joliet shows that part of the deep waterway already built. The part from Joliet to St. Louis was surveyed by United States government engineers, under the direction of Congress, in 1904, and a report made to Congress that its building was feasible. The building of the part between St. Louis and New Orleans was also surveyed by United States engineers and declared feasible.

The association has accomplished the hard task of getting this project before the public in such a manner that they have come to a full realization of the need of it, Presidents and Congresses have paid attention to the idea, but not until the engineering work is under full way and there are funds in sight sufficient to finish the work will the danger of an ultimate failure be past.

The slogan "Do It Now" can well be applied to this work; when you, individually, as a member of the American Nation, realize the compelling necessity of this long-felt need, then can the men who have promulgated the deep waterway feel that their efforts have not been in vain.

C. C. Quincy, who was connected with the U. S. Gypsum Company for many years and is among the best known men in the trade from the Atlantic to the Pacific Coast, severed his connection with this firm and left for New York City Saturday, the 12th of November. He has formed a connection with the Atlas Portland Cement Company and has his desk in its general offices in New York. He will prove a valuable and able lieutenant to the president of the great cement corporation.

TIRED OF STRIKES.

The strike system is doomed. The country is sick and tired of it. The word "strike" has the most unwelcome sound of any in the language. Wives are pleading with their husbands to break away from the unions. Children pinched by dire want lift their pitiful faces in supplication. Mothers with bleeding hearts are praying to God daily to move the accursed blot from the earth.

Thousands upon thousands of union men are sick at heart and are quietly breaking away. They have listened to the siren voice of the agitator and have submitted against their wills. With slow step they have joined the strikes and with heavy hearts they have hoped against hope. Reason is dawning upon them. They are asking themselves why they support a strike. They find no answer in their hearts.

Fifty years of strikes have demonstrated that there is not one particle of good in them. They have invariably produced misery. They have sought to deprive men of their liberties. They have applied the torch and destroyed millions of dollars of property. They shot down men for following the holy injunction to earn their bread by the sweat of their face. They have invaded the sanctity of the home and blown it up with dynamite. They have stained the earth with innocent blood. They have mocked at the churches. They have turned prosperity into poverty.



SHOWING LAKES-TO-THE-GULF ROUTE.

CHICAGO RETAILERS.

"There was an unexpected and active start in building operations around here three weeks ago," said Jas. E. Lill, who operates one of the large builders' supplies yards at Bryn Mawr avenue.

Edgewater. "But building just now has let down a trifle. Business with me has kept up fairly well this month. I believe if weather conditions this winter are fairly good all dealers will have quite a little business to handle. In building lines Chicago ignores seasons; that is her past record. Collections are anything but good, while general conditions are all right and everything looks bright."

"Notwithstanding this time of the year, we have kept our own teams busy and were compelled to hire several extra ones to deliver builders' supplies to jobs, all of which were rush orders," said J. M. Bower, manager of the Waukesha Lime & Stone Company's yard at Devon avenue and Sheridan road. "Contractors are rushing work to complete buildings before bad weather sets in. There is a lot of work in this part of the city, 'just out of the ground,' ready to start new buildings, on which work will be done all winter getting these structures—flat buildings and residences—ready for occupancy next May. Conditions are all right, but collections are slow, just slow enough to think about, but not to kick at specially."

A large percentage of material for the mason work on the North Side, it is said, is furnished by the M. A. Staley Company, whose yard is at Cornelia street and the Milwaukee & St. Paul railroad tracks. It reports building operations in this section of the city are starting up anew this month and in good shape. The business with this concern has held up well, though naturally falling off the last week, which is to be expected at this time of the year. It reports collections bad, but conditions otherwise good.

"We have had a fair month and have been busy up to the present," reported Alfred Frerk, of Henry Frerk Sons. "It has principally been in the nature of cleaning up, as contractors are rushing work to complete buildings before severe cold weather halts them. Trade now in builders' supplies is commencing to drop off. From building permits issued it can be seen that building operations are starting up again for the winter, and this part of Chicago is getting its share. Collections are decidedly slow, but conditions are good. We have no reason to feel anything but encouraged with the outlook in the trade."

"Business is fair for this time of the year," said N. J. Druecker, of N. J. Druecker & Co., at 2628 Artesian avenue. "Contractors are hurrying us to deliver material to jobs as fast as possible, so that they can complete their buildings while the weather remains favorable. There are quite a number of buildings going up now in this territory, and with fair weather conditions we will have a promising winter. Collections are slow, but looking back over the past year, not slower than usual in the fall. Conditions in every way, I should say, are good."

"We are busy this month, but, of course, less so than during the active months in the past," said Mr. Koch, of Farley, Koch & Co. "This month has been satisfactory in every way. Lots of buildings are going up west and north of us, and business promises to be active all winter if weather permits. Collections are not good, but conditions are."

J. J. Croake, of J. J. Croake Company, Fullerton and Milwaukee avenues, reported business satisfactory this month, taking into consideration the time of the year. He said: "There is much building starting up this last two weeks, and it looks as if we might have a pretty good business, which is not always the case, the coming winter months. There is a large demand for our concrete blocks, which are used in foundations and some super-structures. Collections are not as good as the weather. Conditions are all right."

The Templeton Lime Company, which has an extensive yard at Homan and Grand avenues, had a very good and busy month in builders' supplies. It reports much activity in building operations in its section of the city. Contractors, generally, feel good over prospects for winter, weather not interfering. The company makes no complaint concerning collections, and is fully satisfied with existing conditions in the trade and believes the outlook is decidedly of an encouraging character.

"Things have been pretty good all around, but of course, business is not as active as it has been," said J. A. Coats, of the Crescent Material Company. "The close of the season is approaching and we do not expect big trade at this time of the year. There is quite a little building going on and everything looks bright. Collections are fairly good, and it seems to us money is not quite as tight. No kick coming from us."

Walter L. Woods, president of the Standard Material company, reported busy times all this month until cold weather halted outside cement work, but there is a great deal of plastering and mason work which has turned up lately. There is

much building starting up west, towards Ashland avenue, 20 and 24-flat buildings and many residences. Of course, there is a let-down in business, and there will be a further let-down when severe cold and bad weather sets in. Collections are slow, but everything else looks bright."

The Tuthill Building Material Company has all its teams in service and reports business this month has been good. There are many new buildings started lately and the outlook is fine. Collections are all right and conditions fine, no complaint about anything in the trade is made. If the weather this winter does not turn too severe or bad fairly active months are looked forward to.

"Trade is keeping up well. We cannot kick; in fact, it has been better than the previous months," said E. E. Wetzhold, manager F. Schultz Lime Company at 653 West 16th street. "There is an active demand for lime this month, which is principally used in mason work, but the demand for cement is slow. We keep all our teams busy now, which we did not do during the summer months. Conditions in the trade are good, on the whole."

The Chicago Clay Products Company, of which Geo. W. Park is president and W. M. Kinne, secretary, found business brisk this month. The company handles principally clay products and sewer pipe. In fire brick, flue lining and wall coping they report an active demand, with prices good and very firm. They report prices all shot to pieces in sewer pipe, and therefore are not soliciting any orders, although they sell large quantities of it. John F. Kryda, general manager of the company, said: "There is much building starting up in this territory, and if winter weather is in any way favorable we will keep busy. Collections are poor, but conditions are excellent." As Mr. Kryda is an aspiring candidate for alderman in the 12th ward, it may be inferred that when he spoke of conditions he had in mind both the business and the political outlook.

Carpenter & Browning, 40th avenue and Taylor street, dissolved partnership about two months ago. The business is now conducted by and under the firm name of Geo. T. Carpenter. Frank Paskowicz, his superintendent, said: "We have been pretty busy this month. There is more building in this territory than we expected. The demand keeps up well for fire brick, flue lining, wall coping, and all sewer builders' supplies, while the demand for cement is greater than before, having sold more this month than any previous period this year. Collections are slow, but general conditions good."

This month, the first three weeks, The Union Coal, Lime & Cement Company, 5540 Ashland avenue, had all the business it could handle, but after the 15th it dropped off and it finds things quiet now, but not dull. There is not as much building going on in its territory as other sections of the city. Collections are fair and conditions in the trade, generally, reported satisfactory.

W. N. Carter, of the Chicago Contractors' Supply Company, at 5835 Loomis boulevard, said: "We have been on the jump all month and very busy. Every contractor wants his material delivered to the job in a hurry, and, in consequence, our teams are busily hauling stuff as fast and as long as the day will permit. There is much building starting up lately and there is a promising winter in sight if the weather keeps fair. Collections are pretty good and conditions excellent."

CEMENT CONTRACT AWARDED TEXAS FIRM.

Houston, Tex., Nov. 19.—Two big cement contracts have just been let in Houston by the local branch of William Miller & Sons Company. Both have been awarded to the Browne Builders' Supply Company, and they approximate upward of 20,000 barrels or 100 carloads of cement. One is for 5,000 barrels of cement to be used in the construction of a large power plant. The other is for the construction of a new nine-story office building to be constructed here.

THE ANNUAL BANQUET.

The annual banquet of the Pittsburgh Builders' Supply Club will be held at the Fort Pitt Hotel, Monday, December 12, at 6 p. m. These banquets are the source of much pleasure, but aside from the entertainment feature they serve to bring the various retailers together on a friendly basis, and that in itself is the principal thing.

\$6,500,000 OFFICE BUILDING IN CHICAGO.

D. H. Burnham and Max Pam, of Chicago, are the promoters of a plan to build a twenty-story office building there. Twelve stories of the proposed building have already been rented for \$375,000. The structure when completed will represent an investment of \$6,500,000.

PITTSBURGH RETAILERS.

Pittsburgh, Pa., Nov. 16.—Pittsburgh is rejoicing with good reason this week over the passage of the bond issue of \$10,300,000 which citizens voted upon favorably November 8th. It means, if the bond issue does not encounter too serious legal obstacles, that this city is going to have a boom in heavy construction work next year such as it has not seen since the good times of 1905 and 1906. The bond issue itself provides for a new city hall; freeing the Allegheny river bridges; raising many flood streets to good levels; building enormous additions and reservoirs for the filtration plant; providing pure water for the North Side and the South Side; making thoroughfares to the East End; building a garbage incinerating plant and other costly improvements which will be undertaken shortly after the first of the year. The first issue of some \$4,000,000 is being arranged for now by Controller Morrow, so that the money will be forthcoming by the time contracts can be let. These projects, in themselves, mean hundreds of thousands of dollars in material for the builders' supply men and also mean that many big schemes, such as the warehouse building on the North Side, which have been pending the passing of this question, will be taken up next spring.

For this reason builders' supply men all over the city are jubilant this week and predict that 1911 will break all records for business in Greater Pittsburgh.

These dealers have very good reasons for the faith which is in them. The Pittsburgh Subway Company now has an ordinance pending in council for a subway from the down town district to the East End and also for down town loops. Extra strong pressure is being brought to bear by municipal associations all over the city to get this measure passed. The subway is strongly backed financially and if the project goes through work will be started just as soon as working plans can be drawn and contracts awarded. What this means to the rock products industry of Pittsburgh can easily be understood, for the subway will cost probably \$20,000,000. Other projects which are adding to the good feeling among Pittsburgh dealers are the Point bridge, contracts for which have been awarded, and the bridge over the river at Sewickley, Pa., on which work has already been started. Plans are also being drawn for at least a dozen dams in the Ohio, Allegheny and Monongahela rivers, and contracts for these are likely to be awarded soon.

1910 is winding up with mighty bright prospects for a splendid business next year.

It is of much interest also to note the number of improvements to industrial operations which have been authorized in Greater Pittsburgh during the past few weeks. Among these may be cited the \$6,000,000 appropriation of the Pittsburgh Steel Company, for new furnaces, etc.; the enormous extensions to the Orenstein-Arthur Koppel Company plant below Pittsburgh; the \$4,000,000 project of the Westinghouse people at East Pittsburgh, and plants of the R. D. Nuttall Company, the American Bolt & Nut Company, the Pittsburgh Tool Company, and the Coin Machine & Manufacturing Company, all of which will be built on the main line of the P. R. R., a short distance east of Pittsburgh. Also, the rebuilding of the steel plant of the A. M. Byers Company on the South Side, and the new plant of the National Casket Company on the North Side. These will provide a market for enormous supplies the coming winter and next spring.

The Beechview Builders' Supply Company has furnished considerable material for county and city street and road work. This is nearly finished now and road men are getting into winter quarters. The company reports a good business also in furnishing house building materials, chiefly to the new boroughs of Dormont and Brookline, where more houses have been built this fall than in any other part of Greater Pittsburgh.

James T. Fox, from the West End, announces that he has had a nice bunch of street work at West Pittsburgh to furnish, six new streets having been started there early in the fall. He is also having a pretty fair trade in demand. Building is rather slow in his end of the city.

A new brick plant will be erected next spring by the Pittsburgh Silico & Brick Company at Jackson Center, Mercer county, Pa. A. A. Graham, of Pittsburgh, was elected president of the company at its annual meeting a few days ago; W. M. Graham, of Erie, Pa., treasurer, and C. H. Jax-theimer, of New Wilmington, secretary.

Bowman & Wilson, of McKeesport, say building has been very slow there this fall and that the National Tube Company, which it usually supplies with a large amount of material, is about done buying for the season. It is likely that McKeesport totals for building will be smaller than last year.

James M. Porter is doing a fine business in paving brick this year, having the lead on the trade in many parts of Ohio and western Pennsylvania. The death of his son a few weeks ago was a hard blow to the firm, and was greatly regretted by builders' supply men all over Tri-state territory, where Mr. Porter was exceedingly popular.

The Standard Fire Brick Company, of Pittsburgh, has entered suit against the Connors Sewer Pipe Company, of Rogers, Ohio, to recover on a promissory note for \$99.86, executed March 2, 1910, and made payable 30 days thereafter. The plaintiffs allege that at the present time there is due on this note \$103.33 and asks judgment with interest.

William T. Liggett Company announces that its salesmen are bringing in much better reports from the country towns. Dealers are starting to replenish their stocks and are disposed to place good orders for delivery just as soon as the inventory season is over.

McKalip & Co., leading dealers in Lawrenceville, are going out of the anthracite business, which has been a big feature of their trade for years. They will devote most of their attention to building supplies in the future.

Knox, Strauss & Bragdon report a very fair trade, although it is in small lots and building materials do not figure in it to any extent in their part of the East End. Street orders have been taking up some of their attention and the season is rapidly ending for this work.

The Pittsburgh Builders' Supply Dealers' Club will hold its anniversary meeting at 6:30 P. M. the first Tuesday in December at the Fort Pitt Hotel. The club is a live wire from start to finish. Its meetings are largely attended and it has proven one of the most valuable mutual business helps of any organization in this city.

The \$75,000 arcade building of the Pittsburgh-Buffalo Company, at its model town of Marianna, Pa., was burned November 6th. This company, which is one of the biggest distributors of builders' supplies in this city, erected this building exclusively for the use of its employees at Marianna. It contains a theater, bowling alleys, billiard and pool rooms, dancing floor, skating rink, reading rooms, library, drug store, barber shop, restaurant and doctor's office.

CENTRAL ILLINOIS RETAILERS.

Springfield, Ill., Nov. 21.—One of the large Springfield building transactions for next spring probably will be the new Congress Hotel, which has been incorporated for the purpose of erecting a family hotel at Second Street and Capitol Avenue. The structure will be of eight stories, brick and some concrete. The month was light in building permits from the viewpoint of the rock products dealer, running largely to frame buildings, alterations and repairs. For pre-winter weather business is good, local retailers agree.

William S. Logan, of Paris, sold to the American Tobacco Company, which will build warehouses near the city, a \$25,000 order of lumber, roofing and cement, which will be used at once.

The Frisco Lumber Company has sold its yards at Villa Grove and Witt, Ill., to the Alexander Lumber Company.

John Bartheles will do the general contracting work for the \$80,000 addition to the plant of the Union Brewing Company, of Peoria. All wooden floors in the old structure will be replaced by cement.

E. J. Smith, of Armstrong & Brother, and L. A. Smith, of Champaign, have purchased the yard of Charles Stone at Armstrong, Ill.

H. C. Watkins, of Newman, has purchased the interest of the senior member in the building material firm of Catton, Hale & Company at Long View, Ill. Mr. Catton will retire.

H. M. Smoot & Company, of Homer, are making extensive improvements, putting the entire yard under cover.

The Home Ice and Supply Company has been incorporated at Edwardsville with a capital stock of \$10,000, to deal partially in building materials. The incorporators are John M. Levers, William Levers, William Tomasek and Fred Langreder, Jr.

The Cicero Fuel and Building Supply Company, of Hawthorne, has certified to a dissolution of business.

The United Kansas Portland Cement Company, of Iola, Kan., reopened November 5 with a force of fifty men after being closed two months for repairs.

The Ocean View Construction Company of New York has been incorporated at Brooklyn; capital \$17,000. Incorporators: James McCool, Lawrence J. McGoldrick, Peter J. McGoldrick, all of 44 Court Street, Brooklyn.

LOUISVILLE RETAILERS.

Louisville, Ky., Nov. 17.—Though this is the tail-end of the building season, as far as new work is concerned, building supply men in Louisville are as cheerful as though their Thanksgiving turkeys are assured, and as if they have good chances for securing a festive fowl with which to provide for a yuletide celebration. Everybody, apparently, is busy, and the "hurry-up" spirit which pervades that part of the trade which works in the open and needs good weather for its operations, is keeping everybody on the jump.

Building for October was rather light, but this was to have been expected. The total amount represented by the permits issued was \$295,000, as against \$448,964 for the corresponding month of last year. The number of permits issued was 198. The fact that architects are busy on plans for buildings to be erected during the coming season, however, seems to augur well for building operations in 1911.

An item of interest to those interested in the building trade generally was the approval of the \$1,000,000 of hospital bonds, which was acted on at the election November 8. As soon as the usual formalities connected with testing the issue are completed, the commission in charge will go ahead with letting contracts for the erection of the million-dollar structure. John Chambers is chief engineer of the commission and in charge of the practical details connected with it.

Plans are under way for a new building for the Young Men's Christian Association, which will cost about \$250,000, and though it is not likely that anything will be done about this until next year, everybody is watching it closely. The property on Walnut street, between Fourth and Fifth, is to be improved by the erection of a number of big buildings as the result of the recent construction of the Business Woman's Club and the Walnut Theater.

The Masonic Hospital Association is planning the erection of such a building as is suggested by that name, and intends that it shall cost several hundred thousand dollars. Apartment house buildings are being planned in number, and the Fourth Avenue Investment Company has announced that it will erect an apartment house at Fourth avenue and Kentucky street to cost \$100,000.

George F. Meldrum, of the Union Cement & Lime Company, reported a good demand for cement and lime, considering the season of the year, and said that prospects for the rest of the season, in view of the open weather which has prevailed thus far, are unusually good. The Lehigh brand of cement, which the company represents in this market, is to be used on a big waterworks job, the Mansfield Engineering Company, of Indianapolis, having it in charge.

J. B. Speed & Co., the selling organization of the Louisville Cement Company, reported business good, with lots of contracts being placed. The Louisville Cement Company has increased its capital stock from \$500,000 to \$750,000 in order to take care of extensive improvements which are being made in the plant. The Allis-Chalmers Company is making most of the new machinery which is to be installed. There is an improved demand for crushed rock for use in concrete work and for ballast, Manager Henry Gray reported.

Burrell & Walker reported a good demand for tile and sewer pipe, although a breakdown at the plant of the Owensboro Sewer Pipe Company had delayed the arrival of stock and had interfered with business somewhat. This is now remedied, however, and stock is coming in freely.

The Louisville Hydraulic Brick Company is shipping a lot of material for use in buildings all over the state, the business outside the city being especially good. The high school at Eminence has taken a big volume of brick. C. A. Stout, manager of the company, has returned from that city, where he went to close up the work there.

Manager Frankel, of the Louisville Sewer Pipe Company, said that a good volume of small work is in the market, and that prospects for business are good. This company is one of the newer entrants in the sewer pipe field, but is making rapid headway.

The Milligan Sewer Pipe Company reported that it will probably double the capacity of its plant next spring, as the result of the excellent business which has been experienced of late. October was the best month the company has ever had. The company has secured the contract for the sewer pipe for the Frankfort Avenue job, and also for Section F of the main system.

The S. F. Troxell Company has received an infusion of new blood, J. C. Zulauf having taken an interest in the company and now being one of the active managers, along with Mr. Troxell. The firm

has had some excellent business, especially in connection with roofing, Herman Straus & Sons Company, the National Tobacco Works and the Mengel Box Company ordering pitch and gravel roofs which were put down by the Troxell crews. Lots of work is being figured on, in addition. The Johns-Manville rubber roofing has also been in good demand.

The Southern Roofing & Supply Company, which recently went into involuntary bankruptcy, has had its affairs closed up, Claude Johnson, trustee, selling its stock and equipment to the S. F. Troxell Company.

The National Roofing & Supply Company is going ahead with assurances that it will be kept busy all winter, as it has a big volume of work on hand that will demand attention until the spring. Edward Stericher, head of the concern, is extremely optimistic over the outlook, and reported that the season just passed has been one of the most successful in its history.

The National Brick Manufacturers' Association is to have its annual convention in Louisville next February, the association having accepted the invitation of the Louisville Convention and Publicity League. President Will P. Blair and Secretary T. R. Randall were in the city recently for the purpose of completing arrangements for the convention.

The Ashland (Ky.) Fire Brick Company is rebuilding its plant at a cost of \$60,000. The work thus far completed includes a storage building with a capacity of 5,000,000 brick.

The Southern Brick Company is building an addition to its offices. The company reported business on both building brick and tile to be good.

A decision of interest to material men was recently handed down by the Kentucky Court of Appeals upholding the mechanics' lien law. The court ruled that the owner must pay a lumber company which had furnished material the amount claimed, although it had already been paid to the general contractor. It pointed out, however, that had the material man known of this payment he could not have come forward with his lien later on.

CLEVELAND RETAILERS.

Cleveland, O., Nov. 17.—Business with the Cleveland retailers, while brisk, is not as steady as it was last month. This is largely on account of the wintry weather of the past three or four weeks, which has checked new building operations to quite an extent. There are a number of big projects under way, however, involving the expenditure of several millions of dollars, work on which will be proceeded with first thing next spring. Deliveries on a number of good-sized buildings, which are being gotten under roof for the winter, has been in progress for the past few weeks and has kept the warehouse men tolerably busy.

At the offices of the Cleveland Builders' Supply Company, it was stated that a fair line of business was being experienced. Trade has fallen off somewhat on account of climatic conditions and the fact that the season is gradually drawing to a close. Few big orders in any lines are being contracted for. The season just past, however, has been an unusually good one with the Cleveland Builders' Supply Company and the managers of the different departments all report new records over previous years.

The Quesser Bliss Supply Company is another concern which has been experiencing a good line of business this year. As representative of one of the big terra cotta companies, it has annexed some of the best orders of the season in that line. Mr. Quesser, who has made brick his specialty all his life, has also secured some of the biggest brick orders of the year for his firm.

The Lake Erie Supply Company, now located in the Citizens' Trust Building, has been quite busy during the past month completing deliveries on several big orders contracted for during the summer season.

OCTOBER BEATS RECORD.

The month of October was a record-breaker in the matter of building permits. Permits were taken out in Chicago in October for the construction of 1,140 buildings, fronting 32,400 feet, and costing \$10,077,200, against 986 buildings, fronting 28,701 feet and costing \$7,603,400 for the same month of last year, an increase of 154 buildings, 3,699 feet of frontage and \$2,473,800.

The William Construction Company has been incorporated with \$1,000 capital stock. The directors are Nathan Goodman, Louis Goodman and Samuel Berzick.

NEW YORK RETAILERS.

New York, Nov. 15.—The record of building in New York for October and the first half of November has not been as good as could be expected, but from some dealers there come only glowing reports.

W. C. Morton, of the Rockland-Lockport Lime Company, said that the cement business was growing steadily quite out of proportion to the market for other building materials, although the prices were still unchanged. The large amount of concrete factory construction, and the large municipal and public service works planned or under way is a source of much business at the present time, and the outlook appeared to him to be very good.

The brick situation was commented upon by John C. McNamara, one of the leading brick manufacturers, and one of the best informed brick men in New York. He complained of the price of brick. "If the price doesn't go up soon," he said, "I am afraid that it won't do us any good to have any advance at all."

William B. Dubois, of Simpson Clapp & Co., said that conditions were favorable with dealers in building materials.

This year there has been a marked falling off in the building operations in Brooklyn, while there has not been the usual large increases in the Bronx and Manhattan Boroughs during October. The chief basis of hopefulness for the immediate future lies in the continued rapid growth of building in New Jersey suburbs, which is a large source of business for New York operators and contractors.

Meyer Tarshis, of the Rose Brick Co., commented on the diminished business for October, and said that it was the result of overspeculation in realty, and that it was also partly due to the fact that while New York property was renting well, it was not at the present time selling well.

A representative of the Thompson-Starrett Construction Company, who did not wish to be named, said that it is improbable that an advance in the price of common brick and of Portland cement would affect large building operations. "The ultimate consumer," he said, "finally pays the bill. If he has a plot of ground to develop and he can see a good investment in it, the fact that brick is several shillings a thousand higher, or cement 5 or 10 cents a barrel higher than the present price would not deter him."

"The man who will feel the brunt of such changes in prices would be the speculative builder, who figures on small margins, but rapid sales, and upon the home builder, who has to count every cost. It is the small consumer that the cement companies are trying to reach and you may rest assured that they will see that their product is not put out of the little man's reach."

Two important building announcements in New York are those of a \$1,000,000 apartment house on Broadway at Ninety-eighth street, and of a twelve-story office building for a lithographic concern, at Thirty-eighth street near Seventh avenue.

A record of building operations in New York for October is found in the building permits issued in the different boroughs during the month, and a favorable basis of comparison with the operations for the same time last year. The following table gives the gist of the matter:

Borough—	Permits		Estimated Cost.	
	1910	1909	1910	1909
Manhattan	61	40	\$6,837,000	\$5,369,000
Bronx	149	182	2,896,000	3,346,000
Queens	354	314	1,502,000	1,030,000

Richmond Borough (Staten Island) showed a loss of four permits, but a gain of \$97,000 in estimated cost of building. Brooklyn showed a small loss. Thus it will be seen that while October was ahead of the same month last year, it did not show the same rate of gain that the earlier months did.

The announcement of the plans for another big skyscraper was made on November 12. This one is to be the second highest building in America, and the third highest structure in the world. It will be thirteen feet taller than the Singer building. It is the Woolworth building, to be erected at the corner of Broadway and Park Place, a \$5,000,000 structure, forty-five stories high, and planned to be an architectural ornament to the metropolis. The cost of the property will be further increased by the \$2,000,000 which was paid for the ground, so that the total enterprise will represent an investment of \$7,000,000. The main building will be twenty-six stories high, the tower, which will be eighty-six feet square, being nineteen stories high. The design will be Gothic, and all four walls will receive equally the same ornamental treatment, instead of presenting a single showy face. This fact alone accounts for several hundred thousand dollars of the cost. It goes without saying that the building will be com-

pletely fireproof, and no wood will be used in the general structural work. One of the many novel features will be a swimming pool in the basement, lined with marble. There will also be a gymnasium and a running track on the roof. From a structural standpoint this building will be interesting. Having a sandy foundation to work upon, borings have been made to a depth of 130 feet to bed rock, and thirty-eight caissons, some over sixteen feet in diameter, will be sunk to bed-rock level to obtain a firm setting for the structure, which will tower 625 feet aloft. Below the sidewalk there will be three stories. Counting these, the building will be forty-eight stories high. The contractors having charge of the work will, of course, so consider it. The area covered by the structure will be 18,500 square feet. Cass Guilbert is the architect.

BIRMINGHAM RETAILERS.

Birmingham, Ala., Nov. 16.—Business among the retailers of Birmingham is in a very excellent condition, owing to the large amount of construction going on at the present. Birmingham is now a great metropolis, taking a foremost position among the great cities of the South since the last census report, and there is always the great number of building operations befitting a city of her size. There is no city in America of the same population which exceeds her in the size or amount of contracts let, and as a result the local firms are reaping rich rewards, while several outside companies are seriously thinking of locating here.

The Carolina Portland Cement Co. reports business to be very good. Among their large contracts this month is the sale of 3,000 barrels of cement for local paving work. Mr. Walker had the following to say: "Business during the past month has been very brisk—in fact, better than it has been in two or three months. Although the price of cement is rather low at the present time, in my opinion it will soon rise again."

It is announced that a handsome office building will be erected on the present site of the Commercial State Bank at 213 North Twentieth Street. Further particulars are not yet obtainable, it only being known that the Jemison Real Estate Co. is behind the project.

The Fulewider Building Material Company has enjoyed a very prosperous month. The sale of 17,000 barrels of cement for local street and general construction work is especially worthy of mention.

The Jefferson Brick Company reports a month of great business activity. This firm, while not having on hand any large contracts, is kept continually busy by the inflow of small orders.

Southern Bitulitic Co. has experienced an especially good month. This enterprising firm is doing a large amount of paving work on the south side of the city and also in Corey, where it has still 25,000 yards of work to complete. The Ashland (Ky.) plant of the company has been transferred to Jackson, Miss., where a large amount of work is to be done.

Mr. Sullings of the company had the following to say: "We are very busy at the present time, as work is pouring in every day. Large contracts are to be let soon by Birmingham and several adjoining cities, and of course we expect to capture a good share of the prizes."

A large number of paving contracts were recently held up by the city council on account of the petition of citizens affected. Contracts were about to be let for bitulitic pavement, when the council postponed its action on account of the petition asking for asphalt work.

During the last few days much discussion has taken place among the contractors of Birmingham on account of the sensational charges of Mayor Erum. The mayor states that contractors have in the past paid no attention whatever to the time clauses of their contracts, and have very seldom attempted to finish their work on time. As a result, he states, it is likely that the city will sue the tardy contractors for damages.

WEST COAST RETAILERS.

San Francisco, Nov. 16.—For the first time on record, San Francisco was third in building activities among the cities of the Pacific Coast for the month of October, being surpassed by both Los Angeles and Seattle. The local record of permits granted was \$1,425,116, a material decrease from the September figures, and a still further falling off from the October figures of the last few years. Large buildings under way at present are few in number, and even work of a smaller nature is by no means as active as it was a year or two ago. The local retail market is accordingly rather quiet, though at the moment there is a fairly good movement, due to the rush to get new structures completed before the rains begin. The wet weather

has held off longer than usual, and the fall trade has been much better on that account than it would have been in an ordinary season. The trade in the interior of the state is in good condition, though the usual curtailment is expected during the winter. Prices are well maintained on cement, and lime, which can be shipped to more or less distant points at a profit, but other materials are moving at comparatively low prices.

The Crown Building Material Company has been incorporated at Los Angeles, with a capital stock of \$25,000, by C. F. Potter, J. H. Davidson and P. D. Darnell.

William M. Moore Construction Company of New York has been incorporated with a capital of \$1,000. Incorporators: William M. Moore, Marthe E. Moore, 853 St. Nicholas Avenue; Alanson P. White, 54 Linwood Place, East Orange, N. Y.

ABUSES IN THE BUILDING TRADE.

(Continued from page 23.)

quently accepted as justifiable, and any attack upon them is strongly opposed by those whose prerogatives thereunder are assailed. That which constitutes abuse to one set of interests must, in exact ratio, unfairly benefit some other set of interests; and it would be idle to assume that those benefited by a given custom would abandon the prerogatives long enjoyed without molestation because those abused saw fit to protest in unison. For example, employers do not abandon those privileges with which long established custom has invested them as rights, because labor unions deny that those privileges are rights and attack them as abuses. The equity of relations must first be defined as fully as possible, and subsequent effort, whether protestation or action, must be confined within its limits to insure success. Long standing conditions which the builder believes adverse to his interests must first be defined, and the principle of right established as a basis of action before the first step toward correction can be taken. The builder must first know what should be corrected before he can correct it. Hasty and superficial consideration may lead the builder to demand that which is not rightfully his in which case he will in the end be forced to retreat from a false position. Without careful investigation and a manifest desire to establish equitable relations only with those with whom he is thrown into business contact a sweeping attack, doomed to failure because he lacks the proper understanding of his position necessary to its defense. Such has too often been the action of builders' exchanges, and as an inevitable result they have utterly failed to secure the object for which they are established or to justify their existence. Failure by its members to understand that consistent and unending labor is the price of success in obtaining the ends sought by an organization of builders, just as these characteristics are necessary to success in business or in anything else, presages failure of the organization; and experience has shown that the majority of builders' exchanges that have failed of success have failed from this cause.

The first duty of the builders' exchange is to establish a platform upon which its members can rest unassailable from any standpoint of justice, and then to stand firmly upon it. The eradication of the abuses which exist in the building business, from the builders' point of view, depends almost entirely upon the builders themselves, and it is a self-evident fact that as long as abuses are tolerated and offenses against justice condoned, so long will abuses exist and multiply. Careful organization, in which each member knows the full significance of membership and is willing to abide by its responsibilities, is the surest means to give sufficient weight to united action to insure success.—Industrial Gazette.

CEMENT ON THE FARM.

Cement manufacturers are looking forward to heavy increases in the consumption of cement for building purposes on the farm. This phase of the cement industry, while not exactly a new one, opens up a great field. By using cement a farmer can construct better buildings at less cost.

It was recently demonstrated at the Ohio Agricultural Experiment Station that a cattle feeding platform for twenty head of cattle made from cement would result in economy that would pay for the platform in a year's time. On the farm cement is being used to build barns, floors and foundations, combined mangers and drinking troughs, cow sheds, troughs and drains, feeding floors, feeding platforms, gasoline storage houses, gasoline engine houses, ice houses, silos, walks and approaches, and for tree preserving.

CEMENT

THE CEMENT SITUATION.

There has been a great deal of talk in the daily press regarding a combine of Portland cement producers. This, of course, is not looked upon seriously by the manufacturers themselves, and seldom are they quoted in any of these articles. The truth of the matter is that the law of supply and demand regulates the price of cement very much as it does the price of any other commodity. When business is dull, there are always apt to be a few spineless manufacturers, who, fearing the worst, precipitate trouble by cutting the price when there is not really any necessity for doing so. It is always easier to lower the price than it is to raise it, and, when once the price-cutting fever starts in, there is no telling where it will end.

The past year is just drawing to a close, since the season for selling any large quantities of cement is about over. It has been marked by a steadying of prices caused by the large volume of business. Keen competition has, in some localities, kept the price down to a low level, but taking the entire country as a whole, the price of cement has shown a vast improvement and with the prospect of a very brisk business next year there is every reason to believe that prices will not only remain steady, but show actual improvement next year. Reports from the various manufacturers indicate that they will go into the winter season with comparatively clean warehouses.

The multitude of new uses to which cement is being put every day, coupled with the natural growth of this country, has put cement on a basis where it is a staple, and there should be very little fluctuation in the price.

War among the cement manufacturers never did anyone any good. It is problematical whether the lowering of the price of cement has had any effect on its use. There are many men in the trade who will tell you that it has not done so and that there would be just as much cement used if the prices were higher. Let us hope that if there is any such thing as the manufacturers getting together, that they will do so. Manufacturers are entitled to a legitimate profit, and not even the user of cement will grumble at their getting it.

BOOM CEMENT COMPANIES A BOOMERANG.

ROCK PRODUCTS has found it necessary occasionally to call attention to speculation, particularly in cement manufacturing plants, which should be the bone and sinew of a great industry. The publicity given the operations of the Tidewater Portland Cement Company brings up the history of the financing of a lot of old plants in Michigan and other states, some of them on the shelf now, or if operating, not making any money. Many of them were financed with loud talk and big advertising of boom sales of stock at minimum prices on the face, but really maximum prices, considering what is back of the institution. In every instance, the boom company has been a bad thing for the industry, especially where men are not too particular as to how and where they get their money.

We hope the time has passed when the cement industry will be used as a vehicle by the speculators and gamblers. Financing by speculators is anything but good business in an industry, in fact, it is really a curse. In boom times the investor is easily inveigled into a proposition, where it appears on the surface to make big money.

It seems to us that we have come to that period in the history of the cement industry that, in the future, when boom companies make their appearance on the horizon, that they should be placarded as such, so the unwary will not be beguiled into investing their money. Hard times coming as they do, these companies go down like card houses, bringing ruin in their wake. Let us hope that the curse will not stamp its footprints on the cement industry.

ROCK PRODUCTS from this time forth gives notice that the lightning rod peddlers who have stock for sale in boom companies will be thoroughly advertised. We have all the cement plants we need, to take care of the present demand, and the business factors in the industry, with their present and future plans outlined, will be able to build plants enough to take care of the additional increase in demand.

While we don't think it is horse sense, or believe we have the right to put any board fences

around the cement industry, we do believe that the industry has got its long clothes on now, and any employment of illegitimate methods to add to the production or number of mills should be carefully scrutinized by the trade, so that the unwary will not be drawn into the spider web of the speculative stock seller.

CEMENT MANUFACTURERS MEET.

The annual meeting of the Association of American Portland Cement Manufacturers will be held at the Hotel Astor, New York, N. Y., December 12-13-14.

The meeting of the executive committee will be held Monday evening, December 12. The business meeting of the association will be held Tuesday, December 13, and on Wednesday an open meeting will be held which the public is invited to attend. At this open meeting several papers and addresses pertaining to questions of interest to manufacturers and users of cement will be presented.

JOHN B. MORRISON HEAD OF ATLAS.

The following letter has just been received by the editor of ROCK PRODUCTS from Howard H. Maxwell, vice president of the Atlas Portland Cement Company, stating the facts concerning the recent changes in the personnel of that company:

"There have been so many incorrect rumors and statements made recently as to changes in officers, ownership, etc., of this company that we desire to make you the following statement, which we trust will prove of interest to you:

"John B. Morrison, of Chicago, who has been president of Peter Cooper's Glue Company, has been elected president of the Atlas Portland Cement Company in the place of J. Rogers Maxwell, who resigned on account of ill health. The change became effective November 1. Mr. Morrison was selected for the presidency by Messrs. J. P. Morgan & Co., who have lately become interested in the Atlas company. Mr. Maxwell has been elected Chairman of the Board."

NORFOLK PLANT BEGINS OPERATIONS.

Norfolk, Va., Nov. 21.—President Robert W. Lesley, of the Norfolk Portland Cement Company, reports that since the completion of the new works here, which are now in operation, the output of the American Cement Company is increased by 800,000 to 1,000,000 barrels of cement annually. The present outlook is excellent for future earnings.

WILL COMPLETE PLANT.

Allentown, Pa., Nov. 21.—Announcement is made that financial arrangements have been completed to finish the mammoth plant of the Atlantic Portland Cement Company, at Stockertown. The company was organized several years ago by I. A. Bachman and, with the exception of himself, consisted entirely of California capitalists. Losses sustained in the San Francisco earthquake halted the completion of the plant by these men. Capital stock is \$5,000,000.

BIG CEMENT PLANT STARTED IN MEXICO.

Mexico City, Nov. 21.—The Toltec Cement Company has recently completed a modern cement plant at Toltec, north of Mexico City. The company is composed of American capitalists who have a parent plant at Louisville, Ky. The Toltec cement is said to rank equal with the best imported product.

KNICKERBOCKER CEMENT PLANT GOING UP.

Work on the construction of the new Knickerbocker cement plant being erected at Greenport, N. Y., near Fountain Head, is progressing very rapidly. The president and general manager, Sheldon H. Bassett, states that the three mammoth buildings that will compose the plant will be ready for operation when spring comes.

Work on the foundation of the large main building has been finished, the walls of this foundation being nine inches thick and are reinforced with great piers projecting from the walls inwardly. In the center of the basement are also placed large piers to further strengthen the support of the building. Three tall smokestacks are being erected, each 200 feet in height. The plant is to be equipped with the very latest machinery and will be operated entirely by turbine power.

"The machinery is arriving rapidly," said Mr. Bassett, "and is being installed as fast as the building goes up. The plant will be even larger than the plant of the New York and New England Cement & Lime Company at Hudson, N. Y."

The company has secured as its general traffic

manager Thomas M. Magiff, one of the best posted authorities on cement construction in the country. They are to be congratulated upon securing his services as he is well known throughout the trade and will be a valuable asset to their staff. The plant will employ 1,500 men when completed.

URIAH CUMMINGS DIES.

New York, November 15.—The cement industry was interested deeply upon learning of the death at Stamford, N. Y., of Uriah Cummings, president of the Cummings Cement Company of Akron, N. Y. Mr. Cummings was an authority on questions relating to cement and concrete. For many years he had charge of the investigation conducted by the government upon that subject, and for what he did to hasten the more general acceptance of concrete construction, the cement trade owes him a large debt. He was a frequent and enthusiastic contributor of articles on scientific matters to technical magazines, and the inventor of thirty mechanical devices.

As an indication of his versatility and ability it might be mentioned that he also wrote tales, both historical and fanciful, especially dealing with the Indians of western New York. Among the Tonawanda Indians, who live upon the government reservation near Akron, he was known as Chief Hah-teh-e-nah, having been admitted to their tribe. Mr. Cummings was seventy-seven years old. He leaves a wife and one son, Homer, former mayor of Stamford.

STEEL BUILDINGS TO BE MOVED.

The large steel buildings of the Empire Portland Cement Company at Warner, N. Y., are to be taken down and shipped to Spokane, Wash., where the company is establishing a new plant.

Over 200 tons of machinery have already been moved to Spokane to be used in increasing the output of the plant there. The buildings and equipment are worth about \$600,000.

FORECLOSE BIG MORTGAGE.

Flint, Mich., Nov. 21.—The Detroit Trust Company as trustee of the Gypsum Portland Cement Company of Fenton has filed a motion in the circuit court to allow the trust company to foreclose a mortgage of \$200,000 against the company. The answer returned by Edward Forte, receiver, said that a foreclosure would depreciate the value of the property \$100,000.

ST. LOUIS CEMENT NEWS.

St. Louis, Nov. 18.—A. H. Craney, sales manager of the Union Sand & Material Company's cement department, says that the demand for Portland cement, both at St. Louis and at Kansas City, is still sufficiently good to take care of every barrel which they can manufacture, and this will doubtless continue to be the case until weather conditions become unfavorable for out-of-door work. The uses for cement are now so numerous, and its consumption is so great that the demand totals up to an almost incredible volume. Nothing but impossible weather for its use in both city and country territory can render it advisable to curtail manufacturing, seeing that general business is in prosperous shape, owing largely to the favorable out-turn of the crops.

Charles McCormick, president of the McCormick Waterproof Portland Cement Company, says he is a very busy man these days, and much as he would like to have a social chat with the representative of ROCK PRODUCTS, all that he could stop to speak of was the fact that among their recent contracts the most important is the LaSalle street tunnel at Chicago.

Vice-Consul A. A. Williamson writes from Dalny, Manchuria, that the new Onoda cement factory at Choushuitzer is turning out over 160,000 casks annually. The factory employs about 350 Chinese and Japanese skilled workmen who receive an average of 60 cents gold per day.

The Canada Cement Company has purchased the partially completed plant of the Eastern Canada Portland Cement Company near the City of Quebec. The price paid was about \$600,000.

The Louisville Cement Company, of Louisville, Ky., has filed amended articles of incorporation increasing their capital stock from \$500,000 to \$750,000.

The Standard Oil Company will erect an oil can factory at its works at Constable Hook, Bayonne, N. J. The new building will be of reinforced concrete construction, two stories high, and will measure 150 by 300 feet. It will cost about \$75,000.

The Coming Cement Show at New York

Stupendous Preparations Now Going on For the First Real Cement Show to Be Held at Madison Square Garden December, 14-20.

All indications promise that the First Annual Cement Show to be held in Madison Square Garden, in New York, December 14-20, is to be an overwhelming success. All arrangements for the show are practically completed. The different railroads have announced special rates and accommodations to New York during the show, and all the equipment and decorating work is finished and only waits for installation in the Garden. At great expense, a beautiful and unique scheme of wall and ceiling decorating has been installed, and this feature will add greatly to the harmony of the many separate exhibits.

Booths of cement will be among the most noticeable features. This will be the first time that cement has ever been employed in the construction of the booths, and the New York Cement Show will therefore be a cement show "that's a show." Cement will be idolized there and cares forgotten. All the corner posts and railings are of cement, the big task of installing these has been carried out with great success and visitors will be astounded at the marvelous exhibits.

Solid Wall of Concrete.

Along the front of the elevated platform in Madison Square Garden, a solid wall of concrete will be built and at the rear of all booths there will be a three-foot concrete wall, surmounted by an iron picket fence. Electric light brackets, brackets for hanging signs and even the signs themselves, will be of cement. The effect produced will undoubtedly be considered as a distinct novelty at trade shows. The problem of successfully installing all this material is a stupendous one. The Cement Products Exhibition Co. have only a very short time during which this stuff may be moved into the Garden and properly erected. An army of hundreds of men is necessary, and these laborers must be very carefully organized in advance. The equipment has all been constructed in Chicago and a whole trainload of material will be shipped to New York. The portions of equipment representing concrete will show brushed pebble surfaces, pebble dash finishes and plain concrete surfaces.

Large Attendance Predicted.

It is impossible to predict the attendance, but with the wonderful increase in the popularity and applicability of cement in even the last year, it is probable that the splendid attendance of last year at the Chicago Cement Show will be far eclipsed. Concrete is destined to become the focus of attention for all builders. The time is fast approaching when the reinforced concrete building will be the standard, accepted type. The intervals between shows are epochs of cement history. This year will be shown developments that were unknown at the last show. Progress is the keynote of modern industry. Portland cement has risen from comparative obscurity to its present high point of popularity in hardly a decade. A year is to cement what a score of years is to the older building materials. Cement has been the contractors' and engineers' material. Today it is the architect's, the home builder's material. The man does not exist who can not find something of interest and real profit in the 250 exhibits this year. It will not be a duplication of last year's Chicago Show. There are too many new and startling developments throughout the field which will replace even the best received of the exhibits of last year. There is no reason why the East should not have the best of the Industrial Shows. It can have a cement show that will be a real boost to the industry. It can not widen the field of cement use, but it can increase the use of cement in its field. Architects and engineers, contractors and builders, business and professional men will find it to their interest and profit to attend this, the First Annual New York Cement Show, Madison Square Garden, December 14-20.

Sousa Will Furnish Music.

A great deal of interest is attached to the programs of Sousa and his band. This famous organization of sixty musicians will render concerts each afternoon and evening during the show. The performance of this band at the Cement Show will be the best of which the band is capable. The engagement is the last which Sousa and his band have in this country before the departure of the organization, following the day of the close of the show, for an extended tour of the world. The New York

public will undoubtedly take advantage of this unusual opportunity to hear Sousa and to see the Cement Show at a very small price of admission.

Mr. Edison's Exhibit.

The exhibit of Thomas A. Edison is also ready for installation. For the first time at a Cement Show, Mr. Edison will actually exhibit a model of his famous cement house and a demonstration of how this pet project of the great inventor is to be carried out will also be made. The New York Show will have more interesting features than any of the shows which have previously been held in Chicago. The sessions of the convention of the National Association of Cement Users will be held in the concert hall of Madison Square Garden. During the periods when the association is not in session, the Publicity Committee of the Association of American Portland Cement Manufacturers have arranged for a series of talks by a number of prominent men on various phases of concrete construction. The convention of the Association of Cement Manufacturers will be held in the Hotel Astor.

Special Rates to New York.

The railroads in the Trunk Line Association, the New England Passenger Association and the Eastern Canadian Passenger Association, have made a



JOHN PHILLIP SOUSA.

reduced rate of a fare and one-half from all points from which going tickets are 75 cents or more.

Going tickets with certificates may be purchased not earlier than December 9 and not later than December 19. On the return trip, reduced rate tickets are good up to and including December 23. In going to New York, full fare must be paid and the agent must be asked for a certificate. Upon arriving at New York, the certificate must be presented at the office in Madison Square Garden for validation, for which a fee of 25 cents for each certificate will be charged. This certificate will then entitle the holder to a return ticket at one-half the regular fare.

The Trunk Line Association covers the territory lying east of Pittsburgh and Buffalo and comprises the following railroads:

Baltimore & Ohio R. R.
Buffalo, Rochester & Pittsburgh Ry.
Central Railroad of New Jersey.
Chesapeake & Ohio Ry.
Delaware & Hudson Co.
Delaware, Lackawanna & Western R. R.
Erie R. R.
Lehigh Valley R. R.
New York Central & Hudson River R. R.
New York, Ontario & Western Ry.
Pennsylvania R. R.
Philadelphia & Reading Ry.
West Shore R. R.

The New England Passenger Association comprises the territory east of New York State.

The Eastern Canadian Passenger Association covers all points in Canada east of and including Port Arthur, Sault Ste. Marie and the St. Clair and Detroit Rivers.

The following points are to be observed in getting the reduced rate:

Be sure to request a certificate when buying your ticket.

Do not make the mistake of asking for a receipt. Present yourself at the railroad station for ticket and certificate at least thirty minutes before departure of train on which you will begin your journey.

Certificates are not kept at all stations. If you inquire at your home station, you can ascertain whether certificates and through tickets can be obtained to New York. If not obtainable at your home station, the agent will inform you at what station they can be obtained. You can, in such cases, purchase a local ticket thence and there purchase through tickets and secure certificate to place of meeting.

On your arrival at New York, present your certificate at the validating office in Madison Square Garden.

The validating agent will be in attendance from December 12 to 20, from 9 a. m. to 9 p. m., to validate certificates.

From Points in the West.

Those traveling to New York from points west to visit the Cement Show will be interested in observing a new reinforced concrete pole line, built by the Pennsylvania Railroad on the left of their new right-of-way going into New York City.

This pole line is for the purpose of carrying sixty telegraph and telephone wires, the poles varying in length from thirty-five feet to sixty-five feet. They were designed and built by the Pennsylvania Railroad and are a striking example of a comparatively new use of concrete.

The Pennsylvania lines are planning to run a special train from Chicago to New York for the benefit of the cement men from the west, who will go to New York on account of the Cement Show and the conventions of the National Association of Cement Users and of the Association of American Portland Cement Manufacturers. This train will enter New York by way of the new terminals and will afford the passengers an excellent opportunity of viewing not only the interesting features about the new terminals, but also the new line of concrete poles.

Prominent Speakers to Appear.

The Publicity Committee of the Association of American Portland Cement Manufacturers are arranging for a most interesting series of addresses, to be delivered in the concert hall of Madison Square Garden during the New York Cement Show.

A number of very prominent speakers have already consented to appear and Albert Moyer is conducting negotiations with a number of other men of national reputation.

Thus far, addresses have been secured from the following men upon the subjects mentioned:

Rudolph Miller, Building Commissioner of New York City. Subject: "Fireproof Materials."

Calvin Tompkins, Commissioner of Docks and Terminals. Subject: "Transportation Terminals."

The Honorable Logan W. Page, Director of the Office of Public Roads, United States Department of Agriculture. Subject: "Rural Highways."

C. P. Goodrich, Consulting Engineer of the City of New York. Subject: "Important Reinforced Concrete Structures."

This series of talks will be made afternoons and evenings during the show. A large number of interested people will receive special invitations to attend, although the meetings will be open to any who want to hear the lectures.

EXHIBITORS AT NEW YORK CEMENT SHOW.

	Space No.
The Abbey-Dodge-Brooks Concrete Co., Newark, N. J.	305
Alpha Portland Cement Co., Easton, Pa.	207
Alsen's American Portland Cement Works, 45 Broadway, New York City	289
Allentown Portland Cement Co., Allentown, Pa.	271
American Cement Co., Philadelphia, Pa.	268
American Cement Tile Mfg. Co., 29 Broadway, New York City	316
American Mason Safety Tread Co., Boston, Mass.	320
American Saw Mill Machinery Co., 50 Church St., New York City	337
American Steel & Wire Co., 115 Adams St., Chicago	269-270
Ashland Steel Range & Mfg. Co., Ashland, Ohio	218-219
Anchor Concrete Stone Co., Rock Rapids, Iowa	191
Art Stone Co., Waynesboro, Pa.	7
Arrowsmith Concrete Tool Co., Arrowsmith, Ill.	348

Atlas Portland Cement Co., 30 Broad St., New York City	210-211-212-213
Barrett Manufacturing Co., 17 Battery Place, New York City	344
Barron & Cole Co., Barron Bldg., New York City	222-223-224-225-226-249
Best Bros., Keene's Cement Co., Medicine Lodge, Kan.	202
Blanc Stainless Cement Co., Allentown, Pa.	180
Blanchette Paint Co., 139 Charles St., New York City	204
Blaw Collapsible Steel Centering Co., Pittsburg, Pa.	231-232-233-234
Harold L. Bond Co., 383 Atlantic Ave., Boston, Mass.	138
Briggs Labor Saving Specialty Co., Waterloo, Iowa	196-197-198
Buehendorf Bros., N. Y. Produce Exchange, New York City	318
Brown Hoisting Machinery Co., Cleveland, Ohio	169
Building Trades Employers' Assn., 8-10 Burling Slip, New York City	135
Samuel Cabot, Inc., 141 Milk St., Boston, Mass.	201
Chain Belt Co., Milwaukee, Wis.	244-245
Myron C. Clark Publishing Co., 355 Dearborn St., Chicago	311
Clinton Wire Cloth Co., 133 West 27th St., New York City	227-228
John G. Clough, Quincy, Ill.	147
Cement Machinery Co., Jackson, Mich.	150
Cement Tile Machinery Co., Waterloo, Iowa	152
Ceresit Waterproofing Co., 115 Adams St., Chicago	203
Colwell & Smith, 1133 Broadway, New York City	295
Concrete Engineering, Caxton Bldg., Cleveland, Ohio	183
Concrete Products Co., 35 W. 32d St., New York City	165
Concrete Products Manufacturers' Assn., Newark, N. J.	52
Concrete-Steel Co., 29 Broadway, New York City	184
Chas. J. Cordes, Waldwick, N. J.	121
Corrugated Bar Co., St. Louis, Mo.	248
Crane & Mahoney, 110 W. End Ave., New York City	167
Cropp Concrete Machinery Co., 84 LaSalle St., Chicago	26-37
Crown Point Spar Co., 21 West 4th St., New York City	283
Wm. J. Culom, 170 Broadway, New York City	298
Decorators' Supply Co., Archer Ave. & Leo St., Chicago	297
Detroit Steel Products Co., Detroit, Mich.	166
Dexter Bros. Co., 103-7 Broad St., Boston, Mass.	206
Chas. Dietrichs, 22 East 21st St., New York City	55-56
Edison Portland Cement Co., St. James Bldg., New York City	144-145-146
Elite Manufacturing Co., Ashland, Ohio	272
Erkles Studios, Inc., 227 Lexington Ave., New York City	331
Eureka Machine Co., Lansing, Mich.	156
J. B. Foote Foundry Co., Fredericktown, Ohio	264
Samuel H. French & Co., York Ave. & 4th St., Philadelphia, Pa.	199-200
The Gearless Co., 17 N. Main St., Gloversville, N. Y.	306
General Fireproofing Co., Youngstown, Ohio	247
Frank B. Gilbert, Inc., 60 Broadway, New York City	54
Glidden Varnish Co., Cleveland, Ohio	255
Good Roads Magazine, 150 Nassau St., New York City	321
Graphite Elastic Cement Roofing Co., Cleveland, Ohio	128
Hall Concrete House Co., 267 39th St., Brooklyn, N. Y.	102
Hayden Automatic Block Machine Co., Columbus, Ohio	161
John W. Higman Co., 112 Wall St., New York City	308
Hill Clutch Co., Cleveland, Ohio	267
Hobbs Concrete Machinery Co., Detroit, Mich.	334-335
J. C. Horn Co., 8-10 Burling Slip, New York City	195
Hotchkiss Lock Metal Form Co., Binghamton, N. Y.	164
Benj. A. Howes, 15 W. 38th St., New York City	140
Robt. W. Hunt & Co., 90 West 1st St., New York City	172
Humane Horse Collar Co., Chicago Heights, Ill.	304
Hydrolithic Cement Co., 138 Jackson Blvd., Chicago	133-134
Ideal Concrete Machinery Co., South Bend, Ind.	286-287-288-284-285
Insulite Chemical Co., Aurora, Ill.	327
Ironite Company, 84 LaSalle St., Chicago	342
Jeffrey Manufacturing Co., Columbus, Ohio	292-293
W. B. Jones Streator Boiler Works, Keokuk, Ill.	96-97
Kelley Island Lime & Transport Co., Cleveland, Ohio	250
Kennicott Co., 602 Corn Exchange Bk. Bldg., Chicago	19
Kent Machine Co., Kent, Ohio	5-6
Kent Mill Co., 170 Broadway, New York City	154-155
Keystone Varnish Co., 71 Otsego St., Brooklyn, N. Y.	310
Klickerbocker Portland Cement Co., 1 Madison Ave., New York City	333
Kochring Machine Co., Milwaukee, Wis.	253-254
Klickerbocker Co., Jackson, Mich.	262-263
Kramer Automatic Tamper Co., Peoria, Ill.	328
La Grange Specialty Co., La Grange, Ind.	328
Lawrence Cement Co., 1 Broadway, New York City	194-195
Link Belt Co., 39th & Stewart Ave., Chicago	246
Lock Joint Pipe Co., 165 Broadway, New York City	276-277
Luck Cement Post Mould Co., Aurora, Ill.	303
Marsh-Capron Mfg. Co., Old Colony Bldg., Chicago	210-217
McArthur Concrete Pile & Foundation Co., 11 Pine St., New York City	312
McElroy & Shepherd, Whitestone, L. I., New York	125-126-127
Alexander Milburn Co., 507 W. Lombard St., Baltimore, Md.	336
Clifford L. Miller & Co., 110 E. 23d St., New York City	336
Milwaukee Concrete Mixer & Machinery Co., Milwaukee, Wis.	157-158
Milwax Company, 1123 Broadway, New York City	186
Monument Plaster Co., Newark, N. J.	339
Milton Dana Morrill, Corcoran Bldg., Washington, D. C.	181
Municipal Engineering & Contracting Co., Ry. Exchange Bldg., Chicago	192
National Mixer Co., 400 Powers Bldg., Rochester, N. Y.	256
New Process Stone Co., 117 Ostranda Ave., Syracuse, N. Y.	136
Norwalk Vauld Co., Norwalk, Ohio	294
Nugget Polish Co., 299 Broadway, New York City	345
Obelisk Waterproofing Co., 1 Madison Ave., New York City	50
Ohio Post Mold Co., Nicholas Bldg., Toledo, Ohio	261
Ottawa Silica Co., Ottawa, Ill.	132
Peerless Brick Machine Co., Minneapolis, Minn.	190
Pennsylvania Cement Co., 29 Broadway, New York City	143
Pennsylvania Crusher Co., Stephen Girard Bldg., Philadelphia, Pa.	238
Pfeiffer Brothers, Kaiserslautern, Germany	281



Pittsburg Steel Products Co., Pittsburg, Pa.	251-252
D. & A. Post Mold Co., Three Rivers, Mich.	176
Progress Publishing Co., 13-21 Park Row, New York City	302
Quonnor Dry Crusher Co., Singer Bldg., New York City	346-347
Raber & Long Mfg. Co., Kendallville, Ind.	338
Ransome Concrete Machinery Co., Dannelen, N. J.	239-240
Rickman Cement & Construction Co., Revelstoke, B. C., Canada	163
Raymond Concrete Pile Co., 140 Cedar St., New York City	221
Richardson Scale Co., 3 Park Row, New York City	179
Reichert Manufacturing Co., Milwaukee, Wis.	159-160
Richardson & Boynton Co., 81 West 31st St., New York City	299-300-301
Rock Products, 355 Dearborn St., Chicago	131
Sandusky Portland Cement Co., Sandusky, Ohio	214-215
Sasgon Brothers, 2053 Racine Ave., Chicago	151
Simpson Cement Mold Co., Columbus, Ohio	174-175
D. B. Smith, Mount Healthy, Ohio	47
F. L. Smith & Co., 50 Church St., New York City	280
F. P. Smith Wire & Iron Works, 100 Lake St., Chicago	341
T. L. Smith Co., Old Colony Bldg., Chicago	257-258
Somers Brothers, Urbana, Ill.	129
Standard Paving Co., Newark, N. J.	35
Standard Scale & Supply Co., New York, 136 W. Broadway	148-149
Sterritt-Thomas Foundry Co., 32d & Smallman Sts., Pittsburg, Pa.	313
Stocker Concrete Material Washer Co., Highland, Ill.	153
Studebaker Bros. Co. of New York, Broadway & 7th Ave., New York City	123-124
G. L. Stuebner Iron Works, Long Island City, N. Y.	130
Sturtevant Mill Co., Boston, Mass.	235-236-237
Taylor Iron & Steel Co., High Bridge, N. J.	178
Toch Brothers, 320 Fifth Ave., New York City	259
Toledo Wheelbarrow Co., Toledo, Ohio	243
Trussed Concrete Steel Co., Detroit, Mich.	273-274-275
Tucker & Bertin, 35 W. 32d St., New York City	182
Turner Construction Co., 11 Broadway, New York City	208-209
United Concrete Machine Co., Columbus, Ohio	31
Universal Portland Cement Co., 115 Adams St., Chicago	141-142-205-220-230-278
Universal Unif. System, 132 Nassau St., New York City	325
W. H. Van Guilder, 170 Lockwood Ave., New Rochelle, N. Y.	53
Virginia Portland Cement Co., 26 Beaver St., New York City	307
Virginia Waterproofing Corp., Norfolk, Va.	326
B. Volght, 68 Broad St., New York City	324
Vulcanite Portland Cement Co., Fifth Ave. Bldg., New York City	266
Wadsworth-Howland & Co., Inc., Boston, Mass.	139
Chas. Warner Co., Wilmington, Del.	173
Warner & Haviland, 79 Walker St., New York City	323
Waterloo Cement Machinery Corp., Waterloo, Ia.	241-242
The Waterproofing Co., 150 East 36th St., New York City	279
C. S. Wert, Kendallville, Ind.	177
W. H. Wilcox Co., Binghamton, N. Y.	188-189
Wilson & Baillie, 26 Court St., Brooklyn, N. Y.	309
X-L-All Manufacturing Co., 21 S. Clinton St., Chicago	220
Zeiser Brothers, Berwick, Pa.	343
Zibell Damp Resisting Paint Co., 273 Water St., New York City	332

Information for Exhibitors.

OFFICE OF THE CEMENT PRODUCTS EXHIBITION CO.

The office of this company will be at the Prince George Hotel, New York City, on and after November 28.

SHIPMENT OF GOODS.

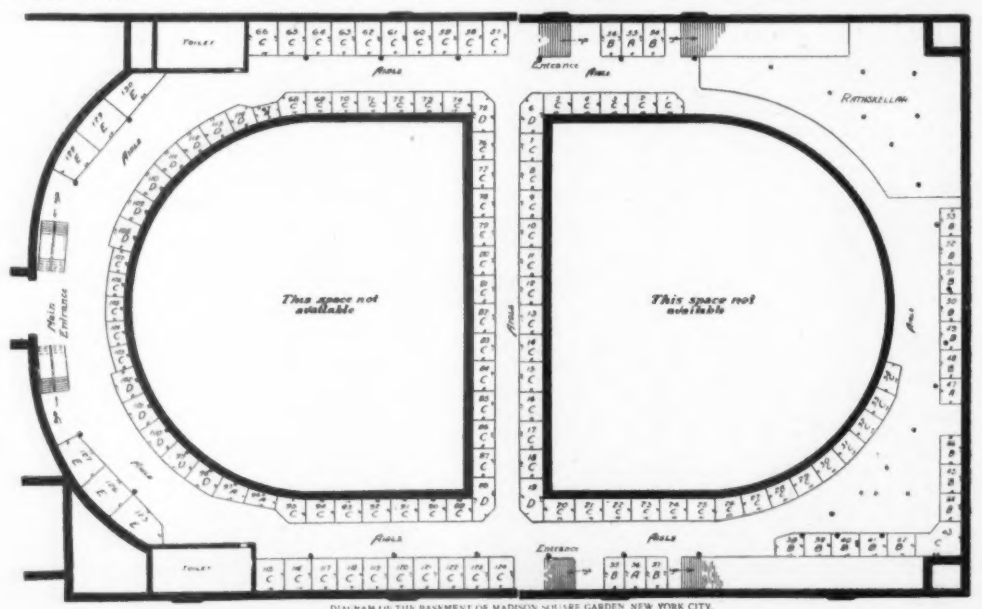
Charges on all material shipped for exhibition at the New York Cement Show should be prepaid. Shipments should be addressed to the exhibitors, care of Madison Square Garden, New York City, and the space number of the exhibitor should be shown. If the bill of lading is sent to the Cement Products Exhibition Co., Prince George Hotel, New York City, the same will be turned over to a teaming company, who will look after the transfer of the shipment to Madison Square Garden. Exhibitors wishing to take the matter up directly with a teaming company are referred to John F. Murray, 552 West 41st Street, New York City, who will be glad to look after the transfer of exhibits from the freight depots into the Garden.

TIME FOR INSTALLING EXHIBITS.

Exhibitors may move into Madison Square Garden to install exhibits, after 5 p. m. Monday, December 12, and may have until 5 p. m. Wednesday, December 14, to complete their exhibits. No goods will be received after 5 p. m.

REMOVAL OF EXHIBITS.

Exhibitors must remove their exhibits from the Garden between 11 p. m. Tuesday, December 20, and 6 p. m. Wednesday, December 21.



PAYMENTS FOR SPACE.

Exhibitors will not be permitted to enter Madison Square Garden until their spaces have been paid for in full.

EXHIBITORS' PASSES.

A blank form for the names of the parties to receive exhibitors' passes may be secured at the main office. To each person entitled to admittance, a lapel button containing the word "exhibitor" will be issued, as well as a ticket. The button must be shown to the ticket taker at the Garden and the ticket must be presented. This ticket will be collected by the ticket taker. On leaving the Garden, the exhibitor must again show his button and receive from the ticket taker a new ticket, which, when presented with the button, will admit the exhibitor.

EXHIBITORS' REDUCED RATE TICKETS.

Exhibitors may purchase reduced rate tickets in lots of one hundred or more at twenty-five cents each. The management is now ready to fill orders for these reduced rate tickets. Cash remittance should accompany order for such tickets. These tickets are sold to exhibitors only, and must be used by exhibitors only. They must not be sold and each exhibitor must stamp on the back of each ticket the following: Compliments of ———. In the blank should be placed the name of the company purchasing the ticket. The object of these tickets is to enable exhibitors to provide their friends and customers with complimentary admissions to the Cement Show.

NO TACKING ON EQUIPMENT.

Exhibitors are cautioned to drive no tacks or nails in the posts, railings, furniture and other portions of their booths. Exhibitors will be held responsible for damage done to any of the equipment provided by the management. Exhibitors having spaces against the elevated platform, are particularly warned to drive no tacks into the wall at the rear of their spaces. This wall will be of solid cement construction.

SIGNS.

The rules respecting signs will be strictly enforced. The management will install a sign showing the firm name of the exhibitor. The display of any other signs is discouraged. Exhibitors will not be allowed to display signs showing the name of the contractor for their exhibit. No signs of any character should be displayed in any booth without obtaining the consent of the management first.

SUBLETTING SPACE.

The rules respecting the subletting or division of spaces will be enforced without exception.

REDUCED RAILROAD RATES.

Exhibitors, their assistants and employees, should not fail to take advantage of the reduced railroad rates to New York City.

SOUVENIRS.

The distribution of all souvenirs and advertising novelties at the Cement Show will be prohibited. This rule does not apply to printed circulars, pamphlets and catalogs.

DIRT AND NOISE.

The management requests the most careful co-operation of the exhibits in the elimination of dirt and noise from the Show. Every effort should be made to keep all exhibits as clean and dignified as possible. Special care should be taken to reduce to a minimum, the noise made by operating machinery.

CAFE.

An excellent cafe will be located in the Garden near the entrance. Food of good quality and liquors will be served at reasonable prices during the period of the Show.

TELEPHONES.

The New York Telephone Co., Commercial Department, 115 West 38th Street, will install telephones for exhibitors at a cost of \$5.00 per installation. Address the telephone company.

ELECTRIC CURRENT.

The electric current for power will be supplied by the Madison Square Garden Co., at the rate of ten cents per hour per horse power while running. The current is 120 volts direct. The charge for electric wiring will be \$10.00 per connection. Arrangements for wiring should be made with the chief electrician of Madison Square Garden.

MOTORS.

Motors for the operation of machinery must be provided by the exhibitor.

HOTEL IMPERIAL HEADQUARTERS.

In connection with the Cement Show to be held in New York next month, one of the important side issues to be considered is the matter of hotel accommodations. The headquarters hotel in connection with the show will be the Hotel Imperial, although attention will be centered upon Madison Square Garden. ROCK PRODUCTS will have its headquarters at the Hotel Imperial, Broadway and 32nd street, and it is probable that a very large number of the visitors will do likewise. Its location is ideal. Speaking from experience, ROCK PRODUCTS has no hesitation in saying that guests at the Imperial will be pleased with the entertainment accorded them.

The Hotel Imperial is conducted under most able management. Robert Stafford is the proprietor, and Copeland Townsend is the manager.

It is on Broadway, extending from Thirty-first to Thirty-second street, within a block of the new Pennsylvania station. A few minutes' car ride, or a shorter time by taxicab, brings one to the Grand Central station. Just a little farther away are the 23rd street ferries. The Sixth avenue elevated station is across the street, also that of the Hudson River tubes. The Broadway cars pass the doors, and it is one of the most conveniently located of



AEROPLANE VIEW OF THE HOTEL IMPERIAL. 1, THE HOTEL; 2, PENNSYLVANIA STATION; 3, HUDSON TUNNELS TERMINAL; 4, THIRTY-THIRD STREET ELEVATED STATION.

any of the first-class modern hostleries with regard to Madison Square Garden.

This hotel has recently been enlarged and there are now eight hundred rooms, six hundred of them being supplied with private baths, and every room is equipped with telephone service. The cuisine is celebrated for its excellence.

The foyer of the hotel is decorated in the style of Louis XIV and recent improvements have added spaciousness to this attractive meeting-place for guests and their friends. The marble staircase here is a work of art, enhancing by its grace and dignity the attractiveness of the handsome foyer.

The Louis XIV grand salon is on the ground floor. Every detail is in perfect accord with the graceful forms of decoration for which the period of the Sixteenth Louis is renowned.

The palm gardens constitute one of New York's most delightful spots for a quiet luncheon or dinner, and the orchestra here is deservedly noted.

A bureau of information for travelers and tourists is one of the important features of the Hotel Imperial.

If prospective guests will notify the hotel management, they will have a representative meet you at your steamer or train, who will arrange for the handling of your baggage.

There will be no carrying charges on trunks to and from the new Pennsylvania Station (provided original baggage checks are delivered to the porter at the hotel).

This service was designed especially to meet the requirements of tourist parties or of ladies traveling alone.

If you want to see the principal places of interest in New York, you will save time and money also by applying to their bureau of information.

If you wish, they will send a courier with you. The convenience and importance of this service cannot be overestimated, and all patrons are requested to make free use of it.

The Imperial provides for the convenience of its guests a fully equipped motor taxicab service.

Tariff.

Room for one person.....	\$2.00 per day
Room for two persons.....	\$3.00 per day
Room, hot and cold running water— two beds—for two persons.....	\$4.00 per day
(Occupants have access to bath conveniently located, without charge.)	
Room with private bath, one person.....	\$2.50 per day up
Room with private bath, two persons.....	\$4.00 per day up
Room with private bath, two beds, two persons.....	\$5.00 per day up
Suite of two connecting rooms, with bath between, two persons.....	\$5.00 per day up
Suite, sitting-room, bedroom and bath, two persons.....	\$5.00 per day up
Suite, parlor, two bedrooms and bath.....	\$8.00 per day up
(Extra bed, \$1.00)	
Service a la carte.	
Club breakfast, 50 cents up.	

SEVENTH ANNUAL.

Convention of the National Association of Cement Users
Will Be Held at Madison Square Garden—
Tentative Program Prepared.

The seventh annual convention of the National Association of Cement Users will be held this year in New York. The time and place of the meeting will be the same as the Cement Show, the Madison Square Garden hall being utilized for the purpose, and the meeting commencing on Monday, December 12, and continuing through the entire week, the last meeting being on Saturday morning.

President Richard L. Humphrey and his committee have labored unceasingly to prepare a program which will be at once comprehensive and thorough. Below will be found the tentative results of their labors, subject to such changes and rearrangement as may be necessary, but, on the whole, correct. It will be seen that the brightest minds and the foremost thinkers in the concrete world have been secured to deliver addresses and papers on the problems of the day.

The importance of these meetings to the trade cannot be overestimated, since they crystallize the thought of the year and plan the campaign for the coming twelve months. Every phase of the proposition has been covered and the program is the best that has ever been promulgated, and it will no doubt attract delegates from all over the country, who can attend the meeting and show at one and the same time. There are so many good papers in this tentative program that to mention any one of them would be futile, since there is hardly a man's name missing who has been prominent in the concrete world or who is not today in forefront of the procession.

TENTATIVE PROGRAM OF THE SEVENTH CONVENTION
NATIONAL ASSOCIATION OF CEMENT USERS.

Madison Square Garden, New York, N. Y., December 12-20, 1910. This program is subject to change and rearrangement.

MONDAY, DECEMBER 12.

- 10:30 A. M.
- Meeting of the Executive Board—Prince George Hotel.
- 2:00 P. M.
- Meeting of the Sectional Committees—
Building Blocks and Cement Products.
Exhibition.
Fireproofing.
Insurance.
Reinforced Concrete and Building Laws.
Roadways, Sidewalks and Floors.
Treatment of Concrete Surfaces.
- 3:00 P. M.
- Meeting of the Section on Roadways, Sidewalks and Floors—General discussion covering the preparation of materials, laying, finishing and costs.
- 9:00 P. M.
- Formal Opening of the Convention—Concert Hall, Madison Square Garden.
- Address of Welcome on Behalf of the City of New York—
Hon. William J. Gaynor, Mayor.
- Response by the President—Richard L. Humphrey, Consulting Engineer, Philadelphia, Pa.
- Address—Benjamin D. Trautel, President Building Trades Employers' Association.
- Business Session.
- Dustless Concrete Floors—L. C. Wason, President Abertaw Construction Company, Boston, Mass.

secretary's notification to the applicant of the assignment made. The balance must be paid not later than January 1, 1911. The failure of an applicant to make payments as specified forfeits his right to use the space, and to any money paid and the management shall have the right to dispose of such space as it shall see fit.

Placing of Exhibits.

Exhibitions must be in place after January 7, and their installation must be completed January 10. All inquiries relating to the show and the convention will be furnished by Ira A. Williams, secretary, Ames, Iowa.

MID-WEST CEMENT EXPOSITION.

Nebraska and western Iowa are to give an exposition in Omaha February 1, 2 and 3 of next year to be known as the Mid-West Cement Exposition, and the Nebraska Cement Users Association has secured the Omaha auditorium for the show. This building, built of cement and stone, has an exhibit space of 19,000 square feet, and the Missouri river dealers and manufacturers propose to fill it with products of cement and cement handling machinery.

H. G. Calkins of the Nebraska Superior Portland Cement Company has been made chairman of the general arrangements committee for the exposition with F. W. Whipperman of the Omaha Concrete Stone Company as secretary.

While the Nebraska Cement Users Association is responsible for the exposition, President H. C.



RESIDENCE OF G. J. GRIESEN AUER, BUILT OF
CONCRETE STRUCTURAL TILE.

McCord has made a contract with the Omaha Commercial Club to finance the exposition and it will be under the management of the local committee headed by Mr. Calkins.

The annual convention of the Nebraska Cement Users Association will be held in Omaha during the exposition. The show will be widely advertised, and it is expected to be an exposition which will be a big boost to cement products. The manufacturers will be in attendance to see the machinery exhibited while the general public will get an opportunity to see the possibilities of cement building materials.

With the large space offered in the Omaha auditorium it is possible to erect anything from a cement house to a cement silo, built of blocks. Farmers of Nebraska are using cement to a greater extent than ever, there being half a dozen cement silos almost within the city limits of Omaha, which have been recently erected by dairymen. The aim



CONCRETE FOOT BRIDGE AT STOCKBRIDGE, MASS.

of the exposition will be to show farmers the advantages of cement construction. Manager Gillen, of the auditorium company, estimates that no less than 30,000 people will visit the exposition during the three days it will be open in Omaha.

**NORTHWESTERN CEMENT PRODUCTS ASSO-
CIATION.**

The Northwestern Cement Products Association will not have a big show this year, but will hold their annual convention in one of the big hotels of Minneapolis or St. Paul. The plan is to utilize the corridors and hotel parlors for exhibition purposes. It will probably be held some time previous to the Cement Show in Chicago, in February. The Northwestern boys are a live bunch who do things, and the following year they expect to have a big show again.

MODEL OF ECONOMY AND GOOD TASTE.

We are showing on this page a photographic reproduction of the handsome little country home of George J. Griesenauer, the cement inspector of the C., M. & St. P. R. R., who is recognized as a discriminating expert in concrete materials, and who has selected the tiles made by the Chicago Structural Tile Company for his house. This is the first house to be completed of the famous Pauly tile in Cook County, or in the state of Illinois, although there are a number of other houses under construction using the same material, among which is the prize house at Walden, Ill., being constructed by the Cement Products Company.

Mr. Griesenauer is to be congratulated on his selection, as well as upon the design and general layout of his house. He has constructed the maximum number of cubic feet of solid comfort that could be put together within its dimensions, and he has been on the job nearly every day himself, to see that his ideas were thoroughly carried out. In this case, the concrete tile has been treated with stucco, as will be observed in our illustration, where the stucco artists are just beginning their work. This house is a model of economy and good taste, demonstrating that a very high class job of stucco can be produced on the surface of the tile, even when cold weather would make such a proceeding impossible with other surfaces.

THE EDMONDSON AVENUE BRIDGE.

The handsome new Edmondson avenue bridge over Gwunns' Falls in the western section of the city's suburbs is now a finished product—the last approach improvement being completed a few days ago. The bridge was built at a cost of something like \$250,000.

It is a four-arched structure of concrete and was erected by the Baltimore Ferro-Concrete Company. The architect was Benjamin C. Fendall, city engineer of Baltimore, and the work was done under

his supervision. The piers supporting the huge arches are of solid concrete arising from a depth of nearly 30 feet beneath the surface of the falls.

The abutments are walls of solid concrete with the covering supported by concrete pillars. The arches are also partly hollowed, but are greatly re-inforced with both steel and concrete connecting rods. The bridge is very ornamental and is considered one of the largest and finest structures of the kind in the East.

UNIQUE FOOT BRIDGE AT STOCKBRIDGE,
MASS.

The accompanying illustration shows a new type of concrete construction as applied to bridges. It is the reinforced concrete foot bridge over the Housatonic river at Stockbridge, Mass. This bridge shows the practicability of a light construction of reinforced concrete, as well as constructions of massive proportions.

The bridge has one clear span 100 feet in length, with a rise of 10 feet. It is only 7 feet 6 inches wide. At the crown the arch is 7 inches thick and is reinforced with 7-inch "I" beams. Before the bridge was opened to traffic the builders had it tested with a load of 25 tons, much more than it will ever bear and the bridge stood the test satisfactorily in every manner. The Concrete Steel Engineering Company were the engineers.

BEAUTIFUL REINFORCED CONCRETE
DWELLING.

One of the most intricate architectural structures in the line of residences ever built from



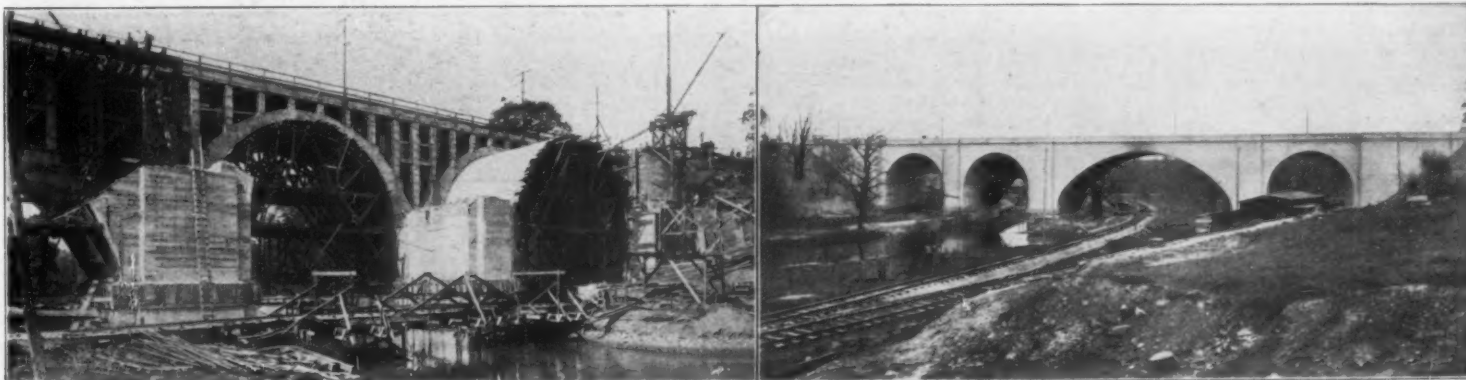
RESIDENCE OF MRS. E. M. NEUSTADT, LOS ANGELES, CAL.

reinforced concrete is shown in the illustration. It is the new home of Mrs. E. M. Neustadt, at West Adams street and Western avenue, Los Angeles, Cal. Besides being, because of its concrete construction, one of the most substantial residences in Los Angeles, it is one that is in every detail of design pleasing to the eye.

At the first view the impression to the observer is one of solidity, as the dwelling is surrounded by great walls of concrete, but this impression is quickly destroyed by the beauty of the place in general. To those who have seen the latter, the house is majestic and resembles nothing more in attractiveness than an ancient French chateau.

The site on which the house stands is 44x81 feet. There are eighteen rooms in it, two of them being each 20 feet wide and 30 feet long. It is constructed throughout of reinforced concrete. The mouldings, trim, ornamental cornices and brackets

(Continued on Page 45.)



EDMONDSON AVENUE BRIDGE, BALTIMORE, MD.

QUARRIES

ANNUAL CONVENTION AMERICAN ROAD BUILDERS.

The seventh annual convention of the American Road Builders' Association will be held at German House, East Michigan and New Jersey Streets, Indianapolis, Ind., on December 6, 7, 8 and 9. In connection therewith will be held a congress of road builders and a "good roads show."

The sessions of the convention and congress will be devoted to the presentation of a large number of technical papers on the subjects of road and pavement construction and maintenance by leading highway officials, discussions of the papers and of matters pertaining to the work of highway improvement, and to addresses by prominent men interested in, and identified with, the various phases of the work. The program is now being prepared and will be announced later. It will comprise papers and addresses covering every phase of road and street improvement and treating the subject from the viewpoint of each of the many classes to which it is of moment.

The membership of the American Road Builders' Association includes the foremost road making and street paving authorities of the United States and Canada, men occupying the chief administrative and engineering positions in the highway departments of states, counties, cities and towns. The experience of these men embraces work with all the materials and methods used in the construction of country roads and city streets and the building of highways under all the varying conditions encountered throughout the country. The opportunities afforded by the conventions of the association to learn from these men, both through the papers prepared and presented by them and by personal meeting with them, renders the annual convention of the American Road Builders' Association the chief event of the year in road building circles.

Following the custom inaugurated last year at the sixth annual convention at Columbus, O., the exhibition of materials and machinery will form an important feature of the convention. Ample exhibition space has been obtained in the German House and the grounds connected with it, thus bringing the meetings and the exhibits together and facilitating attendance upon both without the loss of time. The exhibits will include the various materials and the most improved machinery and appliances for road making and street paving. The greater number of exhibits will be shown in the German House, while the larger and heavier machinery will be displayed in the adjacent grounds.

The meetings and exhibits will be open to the public and a general invitation is extended to everyone interested in any branch of highway work. The headquarters of the association are at 150 Nassau Street, New York City.

Julius Haugk, who purchased the rock quarry of the Arkansas Stone & Iron Company at Imboden, Ark., will expend several thousand dollars in improvements and thereby increase the daily output of the quarry to 100 cars of crushed stone.

The Spencer Stone Company has been incorporated at Spencerville, O., with a capital stock of \$10,000. The incorporators are John Schmorsal, J. A. Wolford, J. W. Lutz and John Schwissel.

The Helena Rock Company has been incorporated at Helena, Ark., with a capital of \$24,000. The incorporators were S. S. Faulkner, J. B. Miles, Jr., Sebastian Straub and W. N. Straub.

The Oklahoma Quarries Company has been incorporated at Chicago, Ill., with \$100,000 capital stock. Incorporators: Norman A. Street, L. E. Street and W. R. Macdonald, all of Chicago.

An explosion destroyed the powder magazine of the Fullerton Stone Quarrying Company, near Allentown, Pa., last week. Enemies of the firm are thought to be responsible.

The Sellwood Dock Company has been incorporated at Portland, Ore., with a capital of \$100,000, to engage in stone crushing business and operate quarries, gravel, sand and earth pits. The incorporators are R. A. Hume, W. H. Morehouse and M. A. Hackett.

LARGEST GYRATORY BREAKER IN THE WORLD.

The accompanying photograph shows the largest breaker ever built, loaded on the train for transportation to Biwabik, Minn., where it will be installed in the plant of the Biwabik Company. This huge breaker, which can produce a forty-car train-load of crushed rock each hour, stands 28 feet high and weighs over 500,000 pounds. The two receiving openings are each 48x108 inches and will take pieces of rock weighing ten tons, which it crushes as easily as eggshells are crushed in the hand.

The development of rock crushing apparatus, from the time when stones were broken by dashing one against another until this present record breaking machine, has always been due to an immediate demand and the machine has been developed to meet existing conditions rather than to act as a stimulant to an enterprise. The development of the crushed stone industry has brought about a rapid advance in crushing machinery, which has been furthered by the mining interests, as in this case.



LARGEST GYRATORY BREAKER IN THE WORLD.

The Biwabik Mining Company has extensive iron ore mining properties which have been developed on the open pit system. This permits the open blasting of the ore which comes loose in large pieces that can be loaded on quarry cars by steam shovel. Most of the ore is taconite, one of the hardest of iron ores, and its crushing to suitable size for blast furnace work is a hard problem.

To handle this ore the Biwabik Mining Company, in 1901, installed the largest and most powerful breaker that had been built up to that time and this naturally attracted considerable attention. This breaker has been in practically continuous service since that time. The enlargement and extension of the company's work, however, has reached such proportions that the old breaker is no longer capable of handling the ore and the breaker just described is now being installed. This breaker was built by Allis-Chalmers Company, which also built the one now being discarded. It is known as a No. 24 and is the largest of its kind ever built by any concern.



QUARRY OF THE STONE PRODUCTS COMPANY, PIQUA, O.

IS THERE A MERGER?

One of the Chicago newspapers, on November 19th, published an article announcing that a selling agency had been organized to handle the product of seven of the largest stone companies in Cook County, including the Western Stone Company, whose stock on the local exchange rose in two days from 15 to 26. It was announced that the agency had been organized as the Producers' Stone Company, with a capital of \$100,000, and that the price of crushed stone had been advanced to \$1.65 per cubic yard for wagon trade, and \$1.15 for carload lots.

No information could be gleaned from any of the stone companies in Cook County regarding this story. They knew nothing of any such agency and nothing concerning a merger. The officials at the Western Stone Company said, probably the foundation of this story rested on a rumor of a pool having been formed for selling stone and the advance in the price of stone lately, which for several years had been too low for allowing not only any actual profit, but entailed an actual loss. The rumor of the formation of this selling pool could not be run down.

The Sibley Quarry Company, Detroit, Mich., has been succeeded by the Church Quarry Company. This does not involve any change in ownership as the Church interests have controlled the company for some time. The following officers have been elected: President, Austin Church, Trenton; vice-president, D. B. Church, New York; secretary and treasurer, H. G. Field, who is in charge of the quarry.

The Corona Rock Company has been incorporated at Los Angeles, Cal., with a capital stock of \$50,000. Directors: George C. Ward, George R. Wilson, Charles A. Henderson, George P. Griffith, Albert Crutcher.

The National Limestone Company, Martinsburg, W. Va., is about to build and equip a quarry plant. R. L. Ahles is the president.

The Helena Rock Company, of Helena, Ark., recently incorporated with a capital of \$25,000, is actively making preparations for beginning operations. The machinery has been purchased and most of it installed. The quarry, which is sandstone, is located seven miles from Heber Springs.

Contracts were let by the county commissioners of Marietta, O., recently, as follows: Contracts to Aaron Bron for the building of a culvert at \$8 per yard for concrete work and \$15 for excavations; to W. R. Wood for the stoning of 40 rods of road at \$9.50 per rod; to Albert Rogers for repairs on the road at \$115, and to Aaron Fleming for repairs on another road, \$600.

PROSPECTING ON THE OHIO RIVER.

The preliminary prospect work for locating the lock and dam sites on the Ohio River was started early last year under the charge of Captain Lytle Brown, of Louisville, Ky., beginning at New Cumberland, W. Va., and extending down the river as far as Ashland, Ky.

Four Ingersoll-Rand machines were placed on the work and a little later four Cyclone drills were installed. The work was carried on steadily and a large number of holes drilled in the river at various points, to determine the depth to bed rock and the general character of the material overlying the rock. The method of doing the work enabled the drilling of a large number of holes very quickly and with splendid results. The first four machines were mounted on flat boats, with the boiler mounted on one end of the boat and the drill on the other. The drill was worked through a well in the boat about 20 inches in diameter; this feature was afterward changed to a slot cut in the end of the boat, which proved much more satisfactory.

In the case of the well it was necessary to complete the hole before the boat could be moved, which was not always convenient without working overtime, as it is always necessary to anchor the drill boats at shore each night, and it is difficult to so gauge the work that the holes be completed at the end of the day without either the loss of several hours' time or working overtime, which is not permissible on government work. Captain Brown conceived the idea of building the boats with a slot extending back from the end of the drill boat to a point where the tools work, and the pipe is driven. By this arrangement the boat may be backed off and returned to the proper position again without disturbing the pipe and is a decided advantage on work of this character.

Aside from drilling test holes across the river, it was also necessary to drill a number of holes along the bank, where in many places it was impossible to set a machine.

This work was completed, after considerable figuring, in the following manner:

An A frame was built about 25 feet high, with suitable braces and also a guy line attached to the top of the frame, and fastened directly opposite the river; a Cyclone drill was then anchored near the bank, the drilling cable run from over the spudding device through a sheave at the bottom of the A frame, then to the top and over the crown pulley to the drill tools; the regular drilling operations were carried on and the holes completed. Otherwise the expense of getting machines to the various locations for drilling the shore holes would have been very great and almost impossible at many points. The material through which the test holes are drilled is the average river formation, consisting of clay, sand, gravel and boulders.

The machines are fitted with what is known as hollow rod tools with special joints and used by the jetting process. Some special drive heads and swivels were constructed for this work, through which a strong stream of water was introduced and was discharged through the openings at the bit shank. As the pipe was driven down, the cuttings from the bit were washed up between the drill rods and drive pipe, from which samples of each stratum were procured, each hole being carefully sampled and a complete log made of it, together with a record of the exact location of each hole.

The work done last year was preliminary; this year the work was again started for completing the final tests and permanent locations; six more Cyclone drills were installed, making a total of fourteen machines on the job, and the work will be carried along by the same methods as were used last year, with such modifications as seem to be necessary.

The accompanying photographs show a part of the prospecting outfits on this work, also the A frame as used for shore holes.

PHOTOGRAPHED DYNAMITE EXPLOSION.

Louisville, Neb., Nov. 17.—A daring feat was recently performed here at the quarries of the National Stone Company by the superintendent, Thomas J. Sullivan, who photographed a heavy dynamite explosion at the quarry. The shot was fired under the direction of their dynamite expert, Oscar Kimblom.

In making the shot about 1,200 pounds of dynamite was used. The ledge disrupted by the shot is from 18 to 24 feet in height and the dynamite is loaded into holes drilled 12 feet back from the face of the ledge and 8 feet apart. These extend for a distance of about 250 feet along the ledge, twenty-six holes in all, containing about thirty-five or forty pounds of dynamite each.

It is estimated that about 6,000 tons of rock was thrown down by this shot, enough rock to load 150 cars, or about two good sized railroad trains. Because of the experience of Mr. Kimblom in loading these batter shots it is possible for him to so arrange his dynamite that the rock is broken up into small masses of from 300 to 500 pounds in weight. However, in a recent shot one rock was thrown out about 40 feet from the base of the ledge which weighed about 300 tons. The danger incident to taking a picture such as Mr. Sullivan secured arises from the great amount of small rock which is thrown up by the shot, a veritable downpour of small boulders following each explosion. When he took the photograph it was necessary for him to show great agility in dodging the rain of rock which followed the shooting of the battery, as he was but 100 feet from the ledge when the explosion occurred.

A very peculiar phenomenon which has accompanied all the large shots at the National quarry is the fact that there is an eruption about 200 feet from the base of the ledge in the bed of the quarry, very much resembling such an upheaval of the earth as is seen in cases of earthquakes. This has been regarded as quite a curiosity by Professor Condra, of the state university. It is due to the great downward pressure of the dynamite finding a place of escape in the soft bed of the quarry.

After the stone is thrown down into the quarry by these large battery shots, it is necessary to do further shooting, in order to break the larger fragments into sizes fit for the crusher. This is done by a process known as block-holing. Holes are drilled into these large stone and then filled with dynamite, which is exploded. The adobe is another shot used to break the large rock for the crusher. In this process two or three sticks of dynamite are laid on a rock and a plaster of mud placed over them. These are exploded by fuses, which are lighted by hand, while the large battery shots are exploded by an electric current. The Independent Powder Co., of Joplin, Mo., furnished the dynamite.

WEST COAST QUARRY NEWS.

San Francisco, Cal., Nov. 16.—The crushed rock market around San Francisco and in some parts of northern California appears to be in rather poor condition, owing largely to the lack of new demand for railroad ballast material, for which the output of a number of large crushers was used.



DYNAMITE BLAST, NATIONAL STONE COMPANY QUARRIES.

There is an enormous output within 100 miles of San Francisco, and quite a number of plants are closed at present. There is a heavy demand, however, for road and street improvements, and a good many small crushers, screens, etc., are being installed at outside points.

The San Francisco Quarries Company, with plants at McNear's Point and Castro Point, on the Bay shore, has levied an assessment of \$5 per share.

The Mountain Quarries Company has secured control of the lime rock quarries near Auburn, Cal. Mr. Henderson, the general manager, states that an aerial tramway will be built from the quarries to Auburn, a distance of three miles.

The Clark & Henry Company, of Sacramento, Cal., has taken a contract for paving seven miles of streets in Colonial Heights near that city.

PUNCTURE PROOF TIRE.

Le Roy, N. Y., Nov. 21.—Gordon Goodrich, the son of C. E. Goodrich, superintendent of the Le Roy plant of the General Crushed Stone Company, has invented and applied for a patent on a new puncture proof automobile tire.

C. W. Doubler, of Madison, Wis., has organized a stock company which will purchase and operate the Red Rock quarries, located near Darlington, Wis. The color of the rock quarried there is varied, and it is largely used in the manufacture of cement brick, blocks and ornaments. In the near future it is planned to erect a reducing plant and open a small town nearby.

The Wheeling Limestone Company, Wheeling, W. Va., has awarded the contract for furnishing and installing two Austin stone crushers, with a capacity of 400 tons of stone daily.

CATSKILL AQUEDUCT.

Contract No. 16 on the Catskill Aqueduct calls for about 2½ miles of cut and cover construction. The aqueduct will be 17 feet high and 17½ feet wide, inside dimensions. The side walls are being built in units from 30 to 45 feet long with a joint between each pair of sections. The joint between the sections is given a coating of cold-water paint to break the bond of the concrete along it and is intended primarily to prevent cracks due to temperature stresses. The aqueduct is to be constructed wholly of concrete.



PROSPECTING ON OHIO RIVER FOR LOCATING LOCK AND DAM SITES.



A FRAME TWENTY-FIVE FEET HIGH ERECTED FOR DRILLING ON SHORE.



DRILLING HOLES IN BED OF OHIO RIVER WITH CYCLONE DRILLS.

CRUSHED SLAG

New Type of Road Material Produced in Ordinary Crusher Plant—For Street Improvements and Concrete.

Slag is the silicious residue or dross "that is produced in the process of refining crude iron ore into workable pig," and in all past time it has been considered as an unavoidable waste, just the same as ashes from burned coal. More than this, it has always been a very expensive waste for the reason that it has to be taken from the great refractory lined furnaces in the molten state in expensively constructed slag cars, which are nothing more nor less than huge side-dump ladles. Each slag car will hold about twelve tons of slag as it is drawn from the furnace, and it is usual to have four to six slag cars coupled together with a locomotive attached to switch this slag train from the drawing spout at the furnace to the dump heap. Since it has always been looked upon as absolutely useless there are very large accumulations of this refuse material right beside every blast furnace where steel pig is produced. There is no way to get iron ore into a usable condition without making slag, and it can be broadly explained thus: The natural ore is intimately mixed with silica in varying proportions and combinations. When heated until all the silica is vitrified or liquefied there would only occur a very slight separation of silica from iron, but pure dolomite rock is added to the molten mass and this fluxes or purifies the iron by absorbing or going into a new combination with nearly all of the



BIG VULCAN SHOVEL DIGGING UP THE SLAG.

impurities contained in the original natural ore. The magnesia and lime, of which dolomite is composed, are both infusible and have an inherent tendency to combine with the thin liquid glass, and the profitable operation of this furnace depends in a great measure upon the kind of fluxing rock used as well as upon the manner and system of handling it.

Thus slag is very distinctively a rock product, and many of our readers are supplying flux rock to furnaces and are well acquainted with the quantity and quality of this indispensable commodity to the reduction of iron ore. Some may take exception to the fact that mention only is made of dolomite flux rock. True, there is some pure lime rock used for fluxing, but comparatively little, and this is not a discussion of slag from the metallurgical standpoint, but as a rock product, with regard to its present usefulness and the possibilities that lie open for development in the near future.

In composition slag may be considered as an artificial igneous rock containing the oxides of silica, magnesium and calcium in prepondering pro-



TYPICAL SLAG TRENCH READY FOR OPERATIONS.



EXCAVATION FOR NEW HIGBEE BUILDING, IN WHICH CRUSHED BLAST FURNACE SLAG WAS USED.

portions. In appearance it is gray, resembling soiled coral, is light, and looks to be "spongy," while in fact the indentations are of a vitreous nature, having a very low absorption capacity. When poured out of the ladles in the molten state it forms miniature lakes and flows out so as to make thin layers, takes on a glassy surface, and is very brittle. A recent government report makes prominent mention of the cementing characteristic that is present in all slag, namely, the lime-silica combination in the condition of low-grade glass, which when pulverized has a tendency to harden into a compact mass again by absorbing moisture.

It will be readily recognized that these qualities are the highest essentials for road and boulevard improvements, for streets, and for all kinds of concrete work. Since clean crushed slag is 18 to 20 per cent lighter than the original dolomite, slag concrete is proportionately lighter, contributing a definite factor for structural calculations which is often useful, while it is not uniform or constant in any of its component proportions, because carelessly handled in the making; yet where the flux rock comes continuously from the same quarry or the same type of rock, the variation in weight and composition is negligible.

The France Slag Company.

Just about the first of the present year the France Slag Company was organized for the purpose of reclaiming slag and putting it through a modern crushing plant for use in macadam, concrete, and tar-treated roads and streets. Much slag is being used under brick pavements in place of stone concrete, giving fine results due to its excellent cementing qualities, and for all kinds of mass and reinforced concrete construction.

N. R. France, one of the pioneer crusher men of the country, is at the head of the concern, with head offices in the Ohio building, Toledo, Ohio. The organization is made up of members of the extensive quarry and contracting establishment with which Mr. France has surrounded himself, as follows: L. A. Beeghly, manager of The France Company and subsidiary companies; J. W. Weldon, Jr., assistant manager; W. E. Bliss, general superintendent of operations.

The principal operations are located at Toledo, Ohio; Canal Dover, Ohio; Leetonia, Ohio, and Detroit, Mich. Accompanying illustrations give some idea of the nature and extent of the several plants.

The plant at Toledo is equipped with a No. 8 Gates crusher, with bins and screen providing for five separations of sizes, and before going to the screen all of the material passes through a magnetic screen for the purpose of taking out all particles of iron that may be entangled in the mass of slag. This magnetic screen consists of a revolving drum surrounded by a series of powerful magnets. The elevator deposits material into the drum, which feeds into the separating screen, and the magnets are alternately charged and deadened with rapid succession. Thus the iron drawn to the magnets is quickly dropped and the magnet ready for more. The principle is the same as the magnetic crane, often used for handling pig-iron.

The device was not found to be so useful as was anticipated, for the reason that the Toledo furnaces get the iron out so clean that only a negligible amount goes into the slag. The hot slag is poured into trenches or valleys between railroad tracks—from 1,000 to 2,500 feet long, and just wide enough for the boom of a big Vulcan steam shovel with 2½-yard dipper to make a clean semicircle. The

steam shovel snorts, biting through six to seven feet of cleanly stratified slag—two swings to a car, six cars to a train, nine minutes to a train load, and all the rest is automatic. Everything about the equipment and the economies developed about the plant speaks of the experience of the management in their particular line.

At Detroit the equipment is almost identical, using a No. 5 Gates crusher, but with an incline and hoist with gravity return of empty cars, for handling the material to and from the plant. At Canal Dover the crusher is a No. 7½, and all of these plants are driven by Allis-Chalmers electric motors built expressly for the crushing trade. Each of these plants has a capacity of approximately 1,000 tons per day, and all finding ready sale.

Boulevards, Street Foundations and Country Roads.

Slag Concrete has already won recognition, and it has been used for road work with success for years. Accompanying illustrations show the boulevard near the Toledo Yacht Club, which is made of slag with stone binder and has been in constant service for a number of years. It is perhaps the most traveled bit of road, as far as automobiles are concerned, in the state of Ohio, and without any repair or attention it is practically dustless—hard, compact, and in every way a perfect boulevard. Six miles of road work in Lucas county are just now about completed. C. W. Beeghly at Canal Dover, reports steady expansion of demand.

L. H. Hawblitz has charge of the advertising and introduction of slag in the Toledo, Canal Dover and Leetonia districts, and reports every indication of a phenomenal year for 1911 in the slag business.

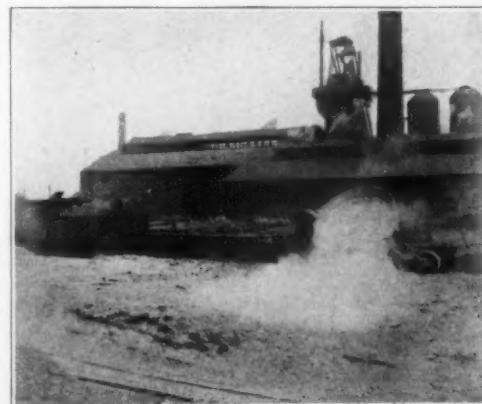
In 1910, the first season of active operations, something like twenty-two miles of road have been



BAY VIEW DRIVE, TOLEDO, SLAG ROAD.

completed, including important additions to the boulevard systems of Toledo and Detroit, as already referred to, besides other cities and towns in Ohio. In the environs of Toledo may be enumerated: Hill Avenue, six miles long, with a slag foundation; the Holland-Swanton road, nine miles, has just been started, which has a slag foundation with a stone top course; Fulton county road, having slag foundation and stone top, has just been completed; State highway, two miles, Jefferson township, Williamson County, Ohio, has a slag foundation. County Engineer Sharp endorses the material above anything for road work. Benton township, Ottawa County, has about 1½ miles of road completed, slag throughout, which is in every way perfectly satisfactory and superior to stone previously used. This big record for the first year shows the promise of future developments which cannot be measured.

At Detroit street foundations are being laid extensively of slag concrete. Arden Park, the beautiful new addition to the residence district, is being paved in this way. The Detroit office is located in the Ford Building, with H. N. Snyder in charge.



POURING MOLTEN SLAG INTO THE TRENCHES.



DETROIT SLAG PLANT.



TOLEDO SLAG PLANT.



CANAL DOVER SLAG PLANT.

We are printing in this issue an illustration that shows to what extent crushed blast furnace slag has been used in Cleveland, Ohio. In the foreground is shown the excavation for the new Higbee building, at the corner of Euclid avenue and East Thirteenth street. Slag was used in all of the footings as well as the columns, girders and floors.

On the right is shown a part of the Sterling & Welch Co. building, which is all slag from grade line to roof, and required approximately 5,000 yards complete. This building is said to be one of the finest furniture and carpet houses in the United States.

In the center is shown the new Pope building, which is all slag from the bottom of the sub-cellar, 42 feet below the street level, to the top of the roof, and it is one of the finest buildings we have in Cleveland.

At the extreme left is shown the small, two-story Euclid-Point building, in which no stone or brick was used, being entirely constructed of slag concrete, and it is considered one of the most unique constructed buildings in Cleveland. The foundations of this building are heavy enough to carry six stories additional, which the owners expect to erect in the near future.

MODERN ROAD MAKING.

The following illustrates the efforts in England to meet in road making the conditions imposed by motor and trolley-car traffic:

A new and direct roadway is proposed between West Hartlepool and Middlesborough, near Newcastle, in the county of Northumberland, a direct line of 7 3/4 miles. In designing the roadway the engineer in charge has given attention to the possible development in both heavy, slow and fast vehicular and motor traffic, each of which demands separate consideration, and possibly different methods of road surface treatment. The plan accordingly provides for a center footpath 9 feet in width; on the east side of the footpath a road for motor and light fast traffic 24 feet in width; and on the west side of the footpath a road for heavy slow traffic 22 feet in width. This gives a width for highway purposes of 55 feet. The plan further shows on the westernmost side of the footpath a width of 14 feet reserved for light railway or trolley purposes, making a total width of land to be acquired of 69 feet.



STORAGE PILES OF CRUSHED AND SCREENED SLAG.

ley purposes, making a total width of land to be acquired of 69 feet.

A scheme similar to this will doubtless control future road making in England, and existing roads may be reconstructed on a corresponding plan. One of the chief advantages in separating the several kinds of traffic would be in permitting differ-



CHERRY STREET BOULEVARD, TOLEDO, SLAG FOUNDATION.

ent methods of surfacing the roads to be used, and those best adapted to the traffic accommodated. Another advantage would be the lessening of the chances of accidents. A third advantage would be the greater speed permissible to fast traveling.

TIDEWATER BROKEN STONE COMPANY.

The Tidewater Broken Stone Company was organized in 1906 with a capital of \$200,000. The company owns twenty-six acres of land at Quincy, Mass. It is estimated that the property contains sufficient trap rock to keep a plant with a capacity of 300 tons a day going for fifty years. At the present time the company is paying 8 per cent dividends annually.

CENTRAL ILLINOIS QUARRIES.

Springfield, Ill., Nov. 21.—Concrete-asphalt pavements laid in Springfield in 1909 is given credit for being one of the most durable improvements in the city by Engineer Frank H. Hamilton in his report. Five miles were surfaced with brick with asphalt filler in 1910, bringing the paved street mileage up to sixty-eight. Ten contracts are now pending, which will be a good start for next season. Nokomis, with a bare 3,000 population, has twenty-six blocks of paving under construction and fifteen more are urged in an insistent manner.

J. E. Solisburg & Company, of Aurora, will pave North Broadway in that city with brick, using a concrete curb and gutter. The bid was \$8,077.

The McCarthy Improvement Company, of Davenport, Iowa, has been given the job of paving, with asphalt, part of Downer Place in Aurora for \$31,039.

All quarries at Hop Hollow, near Alton, are busy as the crushed stone business in the southern part of the state is good. Willis Radcliff, manager for C. F. Stelzel, has a big force of men at work.

Thornton & Michaels, of Mattoon, got the contract to pave North Nineteenth street in that city, but will not begin work until next spring. The contract price was \$12,900.

D. M. Kittinger, of Upper Alton, furnished the

crushed rock from his quarry for Curdie & Maupin so steadily that those contractors were able to pave Mills and Averill Avenues before the public knew what was going on.

Contractor McAuley, of Galesburg, was awarded the contract to pave South Seminary Street, Galesburg, for \$26,859, and will begin work next spring. Concrete curbing, concrete base and concrete gutter is called for.

The city engineer at La Salle has submitted estimates on paving six blocks on Joliet and Canal Streets in that city, amounting to about \$16,000.

Paving and sewer improvements to be made in Freeport, Ill., next year are estimated at \$300,000 and \$400,000 by City Engineer Daniels, a member of the board of improvements.

Z. B. Job, 35 years old, a well-known paving contractor and quarry owner of Alton, Ill., died November 8 at Flint, Mich. His wife and one daughter survive.

R. M. Harrison, of Hampton, Iowa, has purchased the yard of the Chapin Lumber Company at Chapin, Iowa.

The Cramer Coal, Coke and Stone Company, of Cramer, Pa., has leased a large tract of land to A. K. Keltz, of Ligonier. A company is now being organized to develop the property.

The board of public works of Superior, Wis., is negotiating with the Superior Rock Crushing Company, of that city, for its entire output of fine rock for next season. Plants are being made for extensive street improvement work.

The Leathem & Smith Co., at Sevestapol, Wis., has added a new Cyclone drill to its equipment. An order has also been placed for a steam shovel, with a capacity of one and one-quarter yards. With this new equipment the facilities of the company will be greatly increased, and the output of the quarries will as a result be doubled.

The Oklahoma Quarries Company has been incorporated at Chicago to engage in a general quarrying business. Capital stock, \$100,000. Incorporators, Norman A. Street, L. A. Street, and W. R. MacDonald, all of Chicago.



SLAG BOULEVARD AFTER TWO YEARS' WEAR.

PITTSBURGH QUARRY NEWS.

Pittsburgh, Pa., Nov. 20.—A. K. Keltz, of Ligonier, Pa., has leased for five years a large acreage of the Cramer Coal, Coke & Stone Company, near Cramer, Indiana county, Pa., and is organizing a company to operate the quarries on an extensive scale. He has the privilege of renewing the lease for another five years if desired. Work will be started on the project April 1st. A number of Johnstown, Pa., capitalists are interested in the Cramer company, which will retain the coal and operate it as before. The new operating company will be known as the Ligonier Stone & Ballast Company. Associated with Mr. Keltz are H. S. Lohr and P. V. Stephenson.

The Unity Sand & Stone Company has been organized at Greensburg, Pa., by Frank B. Miller, E. M. Gross and J. H. Gallagher of that place. It will mine sand and also an extensive deposit of stone near Greensburg.

A. G. Morris & Son report that they are working about 40 men at their limestone plant at West Winfield, Butler county, Pa. Nearly all their product is being sold in the Pittsburgh district. Mr. Morris says that this year will roll up a much better total of sales than 1909. The firm has been delivering a large amount of crushed stone for road work, much of it going to Tarentum, Pa.

The Ellwood Stone Company, whose quarries are at Ellwood City, Pa., has been furnishing a fine lot of sandstone for the Pittsburgh & Lake Erie improvements at Beaver, Pa., where the new bridge across the Ohio river was recently completed. It is also furnishing some stone for the Sewickley bridge over the Ohio river. It was busy most of the summer shipping stone to the Iron City Stone Construction Company, which had one of the largest Westinghouse contracts ever let at East Pittsburgh.

The Clydesdale Stone Company, the Ellwood Sand Company, and the Craig Stone Company, allied concerns, with offices in the Oliver building, report a fair to good business all fall. Their limestone quarries are located at Ellwood City, Pa., where 120 men are employed and their other quarries at West Ellwood Junction, Pa., where 35 men are employed, are working; and Wertemberg, Lawrence county, Pa., where about 95 men are working. They have been shipping a large amount of sand to Bethesda, and Flushing, Ohio, this fall for road work. The sandstone and limestone companies are just about winding up their season's quarrying. The main complaint they have to make regarding 1910 operations is the inefficiency of labor and the high prices which contractors have to pay for any labor at all. Beaver and Lawrence counties, Pa., were formerly the homes of hundreds of experienced quarrymen who handed down their trade from generation to generation in real "old country" style. Within the past few years the high wages paid in the shops have taken a large proportion of these men for winter jobs, and year by year the number of summer workmen is becoming smaller. The sandstone company will shortly put up a new plant at Wertemberg, Pa., to be in good shape for 1911 business.

Installing Crusher Plant.

Mt. Airy, N. C., Nov. 16.—The North Carolina Granite Corporation, in order to meet the demand for a high-grade crushed granite, are building a crusher plant which will be second to none for its size in point of equipment. Two boilers giving 300 h. p. and a Hamilton Corliss engine of 250 h. p. will furnish the power. The crushers will consist of one No. 5 Gates and one No. 7½ Gates furnished by the Allis-Chalmers Company, and Sturtevant Rolls manufactured by the Sturtevant Mill Company, of Boston, Mass. A storage house will also be built with a capacity of 1,400 or 1,500 tons.

The crushers will be housed in a brick building absolutely fireproof. The crusher plant is located at one end of the quarry and new openings are being made so that the crushers can be fed direct from the quarry. A double track system is also being installed. The arrangement of the plant is economical so far as the handling of the material is concerned and there is no question but that the output will be of the finest grade, as only the best granite will be used.

President Sam Andrews, of the Superior Crushed Rock Company, states that enough men have been secured to run the works full blast and they expect to turn out 20,000 cubic yards of stone this fall. There are sixty men employed now by the company.

The Lock Bar Steel Concrete Company, of Chicago, Ill., has been organized with a capital stock of \$50,000 by Charles Rathbun, R. M. Ashcraft and E. M. Ashcraft, Jr.

ELEVENTH ANNUAL GOOD ROADS CONVENTION.

The National Convention of the Good Roads Association was held at Oklahoma City, Okla., October 4, 5 and 6. A copy of the resolutions adopted by the delegates follows:

Resolved, By the delegates to the Eleventh National Good Roads Convention from Alabama, Idaho, Illinois, Kansas, Minnesota, Missouri, New York, Ohio and Texas, in convention assembled at Oklahoma City October 4, 5 and 6:

That the cost of permanent highway construction and maintenance should be paid jointly by the county, state and nation and that the national government should make a reasonable appropriation for such purpose, and we urge upon every voter to oppose any candidate for the state legislature or the national congress who will not pledge himself to work for such national aid for post roads.

We believe that the vast annual expense for war preparations is excessive. Why not use half of this fund for good roads? We also believe that from experience convict labor where justly used is a great benefit to the construction of public roads and advocate such under the system now prevailing in Colorado.

Several interesting papers were read advancing ideas in regard to road building and proper road construction. The principal address delivered was by B. F. Yoakum, chairman St. Louis & San Francisco Railroad Company, on the second day, October 5. It is given in detail below:

FARMERS' DAY AT OKLAHOMA STATE FAIR, OKLAHOMA CITY—WAGON ROADS AND RAILROADS.

By B. F. YOAKUM.

There is not much new to be said on the value of good roads to agriculture and commerce. Every farmer who hears me knows that the necessity for country roads is as old as farming itself. A good farm away from a railroad or a public road is almost as unprofitable as without water. It is hard to understand why Americans, who have been so enterprising in other things, should be backward in making good country roads. There has been a disposition to use "bull strength" and haul farm products over bad roads regardless of expense.

Good roads add greatly to the profits and comforts of farmers, but knowing so and saying so do not produce good roads; they will have to be made. All talk and no work will not make your roads. Go at it with the same determination you would to dig ditches or build fences. A farmer in Crawford county, Missouri, has his choice of hauling to either of two stations—one two miles away with a poor road, and the other four miles away with a good road. He can drive the four miles in less time and haul larger loads. Good roads cut the time to market in half and double the value of farm property. You can't make as good an investment in any other way, and the state and general public should and will aid you if you go about it in the right manner.

Many can remember that a few years ago one of the important issues of this country was whether we should have free public schools. All admitted the value of them, but a good many close-fisted men thought we were getting along well enough without them, and therefore there was no use in paying out money to educate the masses. It seems now almost unbelievable that the proposition to educate the masses free should ever have been seriously opposed. In earlier days it was an exception to find among the poorer classes one who could read; now it is an exception to find among them one who cannot read.

Western progress is making new conditions. Only a few years ago the rich lands of Oklahoma, so far as farming purposes were concerned, were as far from American markets as if they had been located in South America. It was railroad construction that placed these lands in touch with commerce, and it is the public road that places the farms in touch with the railroads. Railroads were constructed rapidly and people came to Oklahoma in great numbers. Railroads made this great development possible. Good wagon roads are now needed to make it more profitable and to aid the state's growth.

Farmers do not get the use of their share of the money earned in the United States. There are now about 92,000,000 people in the United States, and about 28,000,000 are farmers and their families. The products of the farms are responsible for more than one-third the wealth and commerce of the country. No one can say that one-third of this is used by you in the betterment of the country districts. Compare country roads, full of mud holes, with improved town streets. Look at the country wooden bridges and at town viaducts and steel bridges. The cities have gone in debt for streets to the extent of millions and hundreds of millions. The farmers have not used their share of the money and credit for doing the things that help them. They have borrowed but little money to make their roads compared with what the town people have borrowed to make their streets comfortable and cheap to haul goods over.

By comparison, there is too much money going for the luxuries of the city, and for making life easy there, and not enough for country improvements, such as modern barns, dairies and poultry houses. Not enough is invested in up-to-date farm implements. Our cities are growing faster because money is being poured into them to make them grow. Our farming industry is not developing as it should because there is not enough money expended for the farm life to enable it to keep pace with the town life. The census just taken and now being tabulated will show a great many unsatisfactory things in relation to country life—not only as to decreases of population in many of the country districts and a falling off of productiveness of agricultural life, but a general let-down in agriculture and abandonment of farms in the older states.

After the products of the farm reach the cities they are hauled in some instances for a distance of two or three miles on drays and freight trucks. Think what the town folks would say if they had to pay an extra expense to have their food and other supplies delivered on account of mud holes and deep creeks making their streets at times impassable, as is the case with the farmers to get their products to market.

The value of farm land is fixed by its nearness to a railroad. Almost all of the first-class farm lands imme-

diately along the railroads in Oklahoma are now under cultivation or held for high prices because of their convenience to the railroads. With no more new railroads being constructed it brings the farmers and land owners whose lands are inconveniently located face to face with the question as to whether such lands are to remain unsalable, idle and undeveloped. It is not only a question as to whether the people of Oklahoma will take hold of the improvement of public highways, but also a question as to whether Oklahoma is going to show the marvelous growth for the next ten years which it has in the past, or will be content to go on as at present, with a slow growth along its existing railroad tracks. If Oklahoma is to be confined to the lands which are at present available for transportation facilities, its future growth is limited. If, on the other hand, it can have more railroads and public highways, no one can prophesy what growth the state will have, with its wealth of productive soil, coal lands, oil fields and forests.

But Oklahoma must have new railroads and improved public highways to serve the country lying back from the railroads to enable it to grow as it should, and it should have them now, if the present generation is to enjoy the fruits of its own enterprise.

There is another reason why the making of good wagon roads should be pushed at this time: As all know, railroad construction throughout the country is at a standstill, and I am now going to talk a little about the hardships that follow the stoppage of railroad construction.

We are approaching the year 1911 with prospects not good for building more than 1,000 miles of new railroad, which is 4,000 miles less than our normal for thirty years. The country lying west of the Mississippi is attractive to transportation people, and it will require 170,000 miles of additional railroad to give the vast area of rich country lying between the Mississippi river and the Pacific ocean equal railroad facilities with the country lying east of the river.

To build, ballast, equip and provide terminals and all things that go to make a first-class railroad cannot be done in the Southwest for less than \$35,000 to \$40,000 a mile and in the Northwest for less than \$45,000 to \$50,000 a mile. There should now be building in the country west of the Mississippi 7,000 or 8,000 miles of railroad annually; but, if we build only 5,000 miles annually, it will require the expenditure of over \$200,000,000 a year, to be distributed among those who sell materials and those who sell their labor.

In the last thirty years 150,000 miles have been added to the railroad mileage of the United States. The banner year of construction was under Mr. Cleveland's first administration, when there were 13,000 miles constructed in one year. Eighty-five per cent of the total mileage of railroads built in the last ten years was built in the territory west of the Mississippi and south of the Ohio rivers; and it is safe to say that from this time on for many years, if we can again get railroad construction under way, 85 per cent of the new mileage will be west of the Mississippi river.

When the 1907 panic overtook the country there were under construction 5,000 miles of new railroad which had been contracted for and could not be postponed. This new construction was made up partly of 1,400 miles in the Southwest, with which I was associated, the Pacific coast extension of the Chicago, Milwaukee & St. Paul and the Western Pacific from Salt Lake to San Francisco. Most of this work was completed during 1909. The money for its construction had been provided before the financial trouble of 1907 came on. If any one could have foreseen this panic the money for these 5,000 miles would have been hard to get. This is borne out by the fact that there has been no large construction undertaken since the completion of the above contracts.

The present policy of many of the western states in stopping railroad construction is not inimical to existing railway securities. As a matter of fact, if we are to have no more new railroad construction, the existing securities are made better as the development along existing roads adds to their value. While the present stoppage may be to the interest of the satisfied railway investors, it is against the interests of the western country which needs the development. In New England and most of the eastern states railroad building was practically finished before the Dakotas, Wyoming, Idaho, Utah, Washington, Oklahoma and Montana were admitted to the Union.

The effect of the 1907 panic on railroad employees alone furnishes interesting information on what that temporary stoppage of business meant. The government reports show that there were on, on June 30, 1907, 7½ employees per mile of railroad in the United States. One year later, although the railroad mileage had increased over 3,700 miles, there were only 6½ employees per mile, so that instead of an increase of 27,000 employees to operate the new mileage, there was a decrease of 214,000 employees. The loss to railroad labor alone on account of this reduction in employees and their short hours of work amounted to \$566,000 per day, or the enormous sum of \$184,000,000 in one year. Including the families of railroad employees, more than 1,000,000 people were affected.

While we are all in favor of conservation of our natural resources, we are not in favor of conserving them by non-use. The railroads are the largest purchasing powers of the country. Prior to the panicky conditions of 1907, they were purchasing one-half of the steel products of the United States made from the ore-beds and coal mines of the country, and one-fourth of the lumber.

It is not the people who own the ore-beds and coal fields and the trees of the forests who are the most seriously affected, but labor, commencing with the man who wields the axe to cut the tree to make the tie and the man who uses the pick to take the ore from the mines to make the rails and spikes.

This demoralization extended to manufacturing, industrial, agricultural and mercantile lines, and it is not necessary to tell you what followed. Never in the history of the country were the bread lines so long or so many people out of work. As I said, we cannot always tell what is going to happen, but we know what has taken place in the past. The cessation of railroad construction should now be taken as a warning to the West.

Manufacturing, commercial and labor combinations are so entrenched in the business life of America that we may accept them as permanent organizations with which we must deal in the future. They make for economy and expedition in business and increase the returns of the members, no matter whether they be organizations of merchants, manufacturers or laborers. In a few years the farmers will be organized just as the men are who deal in other commodities through their

[Continued on Page 53.]

SECURITY PORTLAND CEMENT

(Annual Capacity 700,000 Bbls.)

**BERKELEY HYDRATED LIME**

(A 20th Century Product)

BERKELEY LUMP LIME

(Carbonate of Lime 98.28%)

For Building, Chemical and Agricultural Purposes.

BERKELEY RUN OF KILN LIME

(For Agricultural Purposes)

BERKELEY GROUND LIME

(Fresh Burned Lime Uniformly Ground)

BERKELEY GROUND LIMESTONE

(For Manufacturing and Agricultural Purposes)

FLUXING STONE FOR BLAST AND OPEN HEARTH FURNACES

(Silica Less than 1 Per Cent)

CRUSHED STONE

(All Sizes)

For Railroad Ballast, Road Work, Concrete and General Building Work.

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WESTERN OFFICES:

OLIVER BUILDING, PITTSBURG

MAIN OFFICES: EQUITABLE BUILDING, BALTIMORE

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Union Sand & Material Co.ST. LOUIS
Liggett Bldg.KANSAS CITY
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Standard
Brands**OF
PORTLAND CEMENTLightest in Color
Highest Tensile Strength**ALWAYS UNIFORM**

Always the same high quality. Prompt shipment guaranteed and made possible, as each mill is located within switching limits of the two greatest railroad centers of the West. You are assured of your orders being promptly filled.

**SALES**

of nearly one-half million barrels of Universal Portland Cement to one railroad in a single year indicate the satisfaction which Universal gives the engineers of this road in their extensive and varied improvements involving every type of plain and reinforced concrete construction.

Universal Portland Cement Co.

Chicago—Pittsburg

Annual Output 8,000,000 Barrels

Bates Waterproof Valve Bag
(PATENTED)THE
STRONGEST PAPER BAG
MADE

The West Jersey Bag Co.

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Tell 'em you saw it in ROCK PRODUCTS

THE NATIONAL KELLASTONE ROOFING CO.

Operating under license of U. S. Kellastone Co.

Is Now Ready to Take Kellastone Roofing Contracts in Any Part of the United States

Fifteen Factories for the Manufacture of Kellastone Products Now Under Construction

At Last—the World's Greatest Need—A **PERFECT ROOF**

KELLASTONE

A monolithic roof with a crushing and tensile strength far superior to Portland Cement Concrete,

ABSOLUTELY FIRE PROOF AND WATER PROOF

THE MODERN ROOF—ELASTIC, ECONOMICAL, RESILIENT, DURABLE

A KELLASTONE ROOF WILL LAST A LIFETIME

A roof with NO seams, NO joints, NO laps, NO nails, NO coal tar, NO asphaltic compounds, NO gravel, NO waterproofing cements. A roof of unusual density, amazing elasticity, strong and resilient, weighing only two pounds per square foot.

Can be applied to any kind or form of structure as a plane surface, or if desired, with shingle or tile effect.

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Kosmosdale,
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Kosmos Portland Cement Co.

RELIABILITY

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**WAR DEPARTMENT
ENGINEER OFFICE, UNITED STATES ARMY.**

Nashville, Tenn., February 20, 1909.

KOSMOS PORTLAND CEMENT COMPANY,
Louisville, Ky.

Dear Sirs:—Replying to yours of the 12th instant, I beg to advise you that our records show that 22,250 barrels of Kosmos cement were received at Hales Bar, Tennessee River, for the lock under construction at that point, between June 23 and September 25, 1908. All of this material was tested and all of it accepted under the requirements of the Engineer Department specifications.

Very respectfully,
WM. W. HARTS,
Major, Corps of Engineers

A Destructive Fire Prevented the Completion of the 100,000 Barrel Contract. The Rebuilt Mill is Fire-Proof.

It is universally recognized that no tests are more exacting than those of the War Department. A record of uniform acceptance, such as the above, is the best assurance to the purchaser of the unvarying quality of KOSMOS cement. It is a FACT—more convincing than any amount of TALK.

ASK FOR QUOTATIONS

Kosmos Portland Cement Co.

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SALES OFFICE: 1
Paul Jones Building,
Louisville



Tell 'em you saw it in ROCK PRODUCTS

THE QUALITY THAT NEVER FAILS

Trinity Portland Cement

Your Cement needs can be supplied efficiently.
Daily capacity, 4000 barrels. Write to-day.

Southwestern States Portland Cement Company
GENERAL SALES OFFICE: 611 WILSON BUILDING DALLAS, TEXAS

MEACHAM & WRIGHT COMPANY
CEMENT
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SAYLOR'S
Portland Cement
Oldest American Portland

Used by the U. S. Government since 1876.

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It takes a model mill to turn out a Model Portland Cement. Our mill at Superior, Lawrence Co., Ohio, is about as perfect a piece of millcraft as American genius can devise. It is full of big, strong, expensive machinery, which works the flinty limerock and clean shale in a way to delight any mechanic—from crusher to finishing mill. It runs night and day without cessation—handling its heavy grist like clockwork. This is one of the secrets of Superior's success. Another open secret is its low magnesia—only a fraction of 1%. Look up this vital question of magnesia. Our free Booklet "C. 7" treats it in a practical way, and describes the Superior mill in detail. Learn why

"Superior Endures."

Union Trust Building, Cincinnati, Ohio
The Superior Portland Cement Co.

When the

WATERPROOFING

of Cement work is up for consideration, remember


"MAUMEE"

the reliable Compound. Write us for information, samples, and prices.

THE MAUMEE CHEMICAL CO.
403 St. Clair Bldg.
TOLEDO, OHIO



TRADE MARK.



SEE OUR EXHIBITS

NEW YORK CEMENT SHOW, SPACE No. 132
December 14-20, 1910

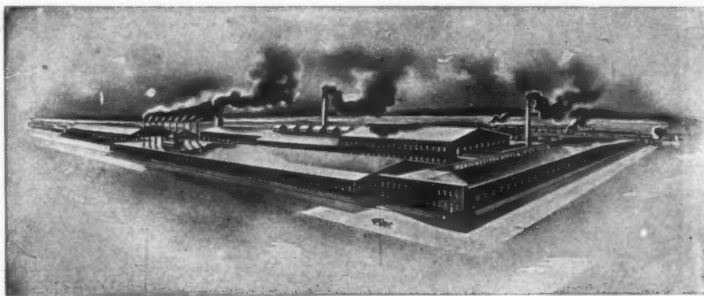
CHICAGO CEMENT SHOW, SPACE No. 11
February 17-23, 1911

Tell 'em you saw it in ROCK PRODUCTS

Wholesale Prices

Block Machines,	\$10 to \$250
Brick Machines,	18 to 47
Mixers,	22 to 500
Porch Column and Baluster Outfits,	15 to 60
Cap and Sill Moulds,	11 to 25
Lawn Vases,	15 to 25
Ball Moulds,	2 to 17
Grave-stone Moulds,	7 to 69
Well Curbing Moulds,	4 to 7
Drain and Sewer Tile Moulds,	6 to 83
Block Cars,	11 to 17
Fence Post Moulds,	7 to 12
Gasoline Engines,	40 to 500
and dozens of other articles such as Trowels, Pointers, Tuckers, Rollers, Groovers, Levels, Shovels, Wheelbarrows, etc.	

We figure our prices at so much per pound and charge no fancy prices on account of patents, territory rights, etc.



1911 Announcement

Our 1910 catalog of concrete machinery will be the most magnificent publication of its kind ever issued. It will describe the entire line of "Northwestern" Concrete Machinery, molds and tools. It will contain hundreds of beautiful half-tone engravings taken from actual photographs. It describes everything in the concrete machinery line and is an encyclopedia of what you ought to have at prices you ought to pay. It is valuable as a reference book, whether you buy our machinery or not.

Northwestern Steel & Iron Works

Ask for Catalog C

Eau Claire, Wisconsin

Box 902

We Are Concrete Machinery Experts

We are distinctly manufacturers and own and operate the largest factory of its kind in existence. During 1910 we have added to our plant another foundry, 200 ft. long by 100 ft. wide, giving us room for one hundred additional moulders. We have also added three new buildings to our manufacturing plant and very extensively to our machinery equipment.

Besides the Northwestern line, we manufacture complete lines of several other large concrete machinery concerns, and we are in the market for manufacturing propositions of this kind at any time. With a moulding capacity of fifteen tons of iron per day in our foundry, and a floor space of over one hundred thousand square feet in our shops; with a large force of pattern makers, moulders and machinists who are experts in this business, we are naturally in a position to negotiate for the largest contracts.

Our Wholesale Catalog is at Your Disposal

We want everyone interested in concrete machinery, to have one of these catalogs. Send us your name and address and state what particular machines molds or you are interested in.

VISIT THE NEW YORK CEMENT SHOW
MADISON SQUARE GARDEN
DECEMBER 14th—20th, 1910
and find out
WHY

EDISON PORTLAND CEMENT

— IS FINE —

AND THE REASON FOR ITS NATIONAL RECOGNITION

A trip to New York City—A Cement Show without equal—and John Philip Sousa's Band are additional attractions.

MANGANESE STEEL

Wearing Parts for all Crushers

MASON SEGMENTAL HEADS
FOR ALL SIZES GYRATORY CRUSHERS

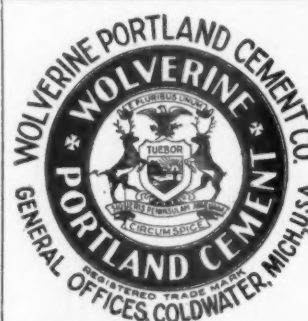
SPUR AND BEVEL GEARING—LONG WEAR AND NO BREAKAGE

STEAM SHOVEL TEETH POINTS and BASES
KOMINUTER PLATES

REVOLVING SCREENS

EDGAR ALLEN AMERICAN MANGANESE STEEL CO.

Works—Chicago Heights, Ill.; New Castle, Del.
General Office—193 Michigan Ave., Chicago, Ill.
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The Alright Cement

MADE RIGHT SOLD RIGHT
WORKS RIGHT
WEARS RIGHT
The Best Is None Too Good For You.
Insist Upon

"WOLVERINE"

Write for Booklet and Quotations.
Factories at Coldwater and Quincy, Mich.
Capacity 3500 Daily.

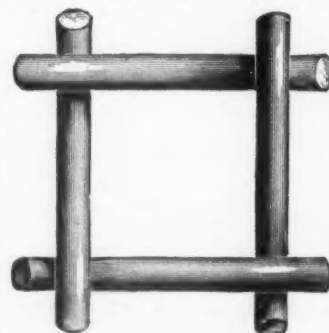
WOLVERINE PORTLAND CEMENT COMPANY

W. E. COBEAN, Sales Agent,
Coldwater, Michigan

Main Office, Coldwater, Mich.

BUFFALO WIRE WORKS CO.

BUFFALO, N. Y.



1-Inch Space, No. 4 Wire

We make

Wire Cloth

From the coarsest to the
finest, for all purposes,
Also

WIRE CONCRETE REIN-
FORCEMENT, WIRE
WORK of all kinds,
CORRUGATED WIRE
"LATHING"

Send for Our No. 416 Catalogue.

Tell 'em you saw it in ROCK PRODUCTS

BEAUTIFUL REINFORCED CONCRETE DWELLING.

(Continued from page 35.)

were all cast at the same time the walls were poured. The reinforcing rods were of twisted steel, of which 80 tons were required in the construction. The floors are of concrete in which nailing strips were embedded and oak flooring placed on top. An architectural feature of the dwelling is the porch, running along two sides of the house; it is 100 feet long and 16 feet wide.

Many concrete retaining walls surround the house and these vary in depth from 2 to 25 feet. These walls entirely incase the house, although some of them are almost level with the ground. The walls are two feet wide at the top and gradually increase in width toward the bottom.

Mr. Hunt, of Los Angeles, was the architect, and Richards-Neustadt Construction Company were the builders. Architect Hunt said: "The only word that will properly express the design of style in the building is 'classical'; other houses may be as substantial, but it is certain none will be more so."

CONCRETE GROWING IN FAVOR.

From the action of the officials of several of the northern counties of California, it is very evident that concrete, as a bridge-building material, is rapidly growing in popular favor. Recently, the officials of those counties publicly announced that no other material, save concrete, would be used in the construction of any bridges.

In support of this action the claim was made that concrete bridges would give better satisfaction, and be more economical than if constructed of either wood or steel. While, perhaps, a superior quality of stone would prove as durable as concrete, yet the latter material would, as a rule, be much cheaper and be just as permanent.

Among the several transcontinental lines of railroad—Southern Pacific, Santa Fe and Western Pacific—concrete is very largely supplanting all other kinds of construction material in California, in such work as bridges and culverts, and also the construction of stations, depots, roundhouses, machine shops, etc.

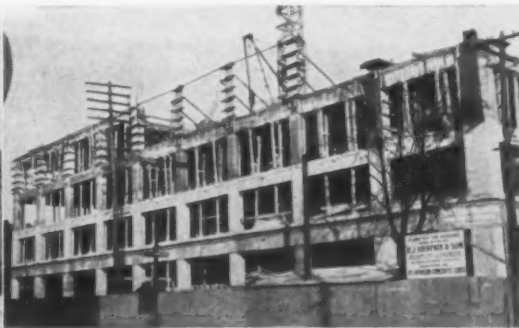
There are several large wagon bridges soon to be built in Butte County, California, and the officials have notified all bidders that no other material except concrete must be used in the construction of these works.

SCOW BUILT OF REINFORCED CONCRETE.

St. Catharines, Ont., Nov. 19.—The new government scow, "Pioneer," was launched here recently. It marks the opening of a new era in marine construction, being built entirely of reinforced concrete. The boat is 80 feet long, 24 feet wide and 7 feet deep. The deck sides and bottom are 2½ inches thick and it has three bulkheads. It draws only three feet of water. It was built under the supervision of Superintendent Weller of the Welland Canal.

TWO BUFFALO RE-INFORCED CONCRETE BUILDINGS.

Buffalo, N. Y., Nov. 19.—The Turner Construction Co., on Nov. 9, put the finishing touches on one of their important pieces of work, which has been in construction since October 1st. This is the factory of the F. N. Burt Co. (Limited), on Niagara street, Buffalo. It is of re-inforced concrete, six stories high with basement. It has a concrete foundation, columns, wall pieces, floors, stairs, walls and roof. It has skeleton construction with maximum window area. While the floors are of concrete, a second maple flooring is used over the concrete and the windows are of wood.



THE F. N. BURT BUILDING, NIAGARA STREET, THE ALLING & CORY CO. BUILDING, BUFFALO, N. Y.

REQUIRED FOR ONE CUBIC YARD RAMMED CONCRETE.

MIXTURES.														
Cement	Sand	Stone	Stone 1 inch and under dust screened out			Stone 2½ inches and under dust screened out			Stone 2½ inches with most small stone screened out			Gravel ¾ inch and under		
			Cement Bbls.	Sand Cu. Yds.	Stone Cu. Yds.	Cement Bbls.	Sand Cu. Yds.	Stone Cu. Yds.	Cement Bbls.	Sand Cu. Yds.	Stone Cu. Yds.	Cement Bbls.	Sand Cu. Yds.	Gravel Cu. Yds.
1	1.0	2.0	2.57	0.39	0.78	2.63	0.40	0.80	2.72	0.41	0.83	2.30	0.35	0.74
1	1.0	2.5	2.29	0.35	0.70	2.34	0.36	0.89	2.41	0.37	0.92	2.10	0.32	0.80
1	1.0	3.0	2.06	0.31	0.94	2.10	0.32	0.96	2.16	0.33	0.98	1.89	0.29	0.86
1	1.0	3.5	1.84	0.28	0.98	1.88	0.29	1.00	1.88	0.29	1.05	1.71	0.26	0.91
1	1.5	2.5	2.05	0.47	0.78	2.09	0.48	0.80	2.16	0.49	0.82	1.83	0.42	0.73
1	1.5	3.0	1.85	0.42	0.84	1.90	0.43	0.87	1.96	0.45	0.89	1.71	0.39	0.78
1	1.5	3.5	1.72	0.39	0.91	1.74	0.40	0.93	1.79	0.41	0.96	1.57	0.36	0.83
1	1.5	4.0	1.57	0.36	0.96	1.61	0.37	0.98	1.64	0.38	1.00	1.46	0.33	0.88
1	1.5	4.5	1.43	0.33	0.98	1.46	0.33	1.00	1.51	0.35	1.06	1.34	0.31	0.91
1	2.0	3.0	1.70	0.52	0.77	1.73	0.53	0.79	1.78	0.54	0.81	1.54	0.47	0.73
1	2.0	3.5	1.57	0.48	0.83	1.61	0.49	0.85	1.66	0.50	0.88	1.44	0.44	0.77
1	2.0	4.0	1.46	0.44	0.89	1.48	0.45	0.90	1.53	0.47	0.93	1.34	0.41	0.81
1	2.0	4.5	1.36	0.42	0.93	1.38	0.42	0.95	1.43	0.43	0.98	1.26	0.38	0.86
1	2.0	5.0	1.27	0.39	0.97	1.29	0.39	0.98	1.33	0.39	1.03	1.17	0.36	0.89
1	2.5	3.5	1.45	0.55	0.77	1.48	0.56	0.79	1.51	0.58	0.81	1.32	0.50	0.70
1	2.5	4.0	1.35	0.52	0.82	1.38	0.53	0.84	1.42	0.54	0.87	1.24	0.47	0.75
1	2.5	4.5	1.27	0.48	0.87	1.29	0.49	0.88	1.33	0.51	0.91	1.16	0.44	0.80
1	2.5	5.0	1.19	0.46	0.91	1.21	0.46	0.92	1.26	0.48	0.96	1.10	0.42	0.83
1	2.5	5.5	1.13	0.43	0.94	1.15	0.44	0.96	1.18	0.44	0.99	1.03	0.39	0.86
1	2.5	6.0	1.07	0.41	0.97	1.07	0.41	0.98	1.10	0.41	1.03	0.98	0.37	0.89
1	3.0	4.0	1.26	0.58	0.77	1.28	0.58	0.78	1.32	0.60	0.80	1.15	0.52	0.72
1	3.0	4.5	1.18	0.54	0.81	1.20	0.55	0.82	1.24	0.57	0.85	1.09	0.50	0.75
1	3.0	5.0	1.11	0.51	0.85	1.14	0.52	0.87	1.17	0.54	0.89	1.03	0.47	0.78
1	3.0	5.5	1.06	0.48	0.89	1.07	0.49	0.90	1.11	0.51	0.93	0.97	0.44	0.81
1	3.0	6.0	1.01	0.46	0.92	1.02	0.47	0.93	1.06	0.48	0.97	0.92	0.42	0.84
1	3.0	6.5	0.96	0.44	0.95	0.98	0.44	0.96	1.00	0.45	1.01	0.88	0.40	0.87
1	3.0	7.0	0.91	0.42	0.97	0.92	0.42	0.98	0.94	0.42	1.05	0.84	0.38	0.89
1	3.5	5.0	1.05	0.56	0.80	1.07	0.57	0.82	1.11	0.59	0.85	0.96	0.50	0.76
1	3.5	5.5	1.00	0.53	0.84	1.02	0.54	0.85	1.06	0.56	0.89	0.92	0.48	0.78
1	3.5	6.0	0.95	0.50	0.87	0.97	0.51	0.89	1.00	0.53	0.92	0.88	0.46	0.80
1	3.5	6.5	0.92	0.49	0.91	0.93	0.49	0.92	0.96	0.51	0.95	0.83	0.44	0.82
1	3.5	7.0	0.87	0.47	0.93	0.89	0.47	0.95	0.91	0.49	0.98	0.80	0.43	0.85
1	3.5	7.5	0.84	0.45	0.96	0.86	0.45	0.98	0.86	0.47	1.01	0.76	0.41	0.87
1	3.5	8.0	0.80	0.42	0.97	0.82	0.43	1.01	0.81	0.45	1.04	0.73	0.39	0.89
1	4.0	6.0	0.90	0.55	0.82	0.92	0.56	0.84	0.95	0.58	0.87	0.83	0.51	0.77
1	4.0	6.5	0.87	0.53	0.85	0.88	0.53	0.87	0.91	0.55	0.90	0.80	0.49	0.79
1	4.0	7.0	0.83	0.51	0.89	0.84	0.51	0.90	0.87	0.53	0.93	0.77	0.47	0.81
1	4.0	7.5	0.80	0.49	0.91	0.81	0.50	0.93	0.84	0.51	0.96	0.73	0.44	0.83
1	4.0	8.0	0.77	0.47	0.93	0.78	0.48	0.95	0.81	0.49	0.98	0.71	0.43	0.86
1	4.0	8.5	0.74	0.45	0.95	0.76	0.46	0.98	0.78	0.47	1.01	0.68	0.42	0.88
1	4.0	9.0	0.71	0.43	0.97	0.73	0.44	1.01	0.75	0.45	1.04	0.65	0.40	0.89
1	5.0	9.0	0.66	0.50	0.90	0.67	0.52	0.93	0.70	0.53	0.96	0.61	0.46	0.83
1	5.0	10.1	0.62	0.47	0.95	0.63	0.48	0.96	0.65	0.50	1.00	0.57	0.43	0.87

TABLE OF PROPORTIONS IN USE BY PROMINENT ENGINEERS AND CONTRACTORS IN NEW YORK STATE.

The cement used is from the Alpha Portland Cement Co.

The Empire Limestone Co., of Buffalo, furnish the limestone.

The Burt Co. will devote the building to the manufacture of boxes. The architects were R. J. Reidpath & Son.

Another important building, very nearly finished by the Turner Construction Co., is that of the new warehouse of Alling & Cory, wholesale paper dealers.

This building is six stories high, of re-inforced concrete. On North Division street it has a frontage of 65 feet, and on Elm street 156 feet. It also has two Ls which run back 118 feet, being 54 feet and 5 inches wide. Floor loads are 300 lbs. on first, second, third and fourth floors to the square foot, while the fifth and sixth floors carry 200 pounds. The building is re-inforced concrete throughout, for all foundations, columns, wall pieces,

floors, roof and basement walls. The curtain walls are of brick with two-inch tile furring on inside. The street front has face brick. This face brick is furnished by John Black, of this city. The floors are hand troweled cement finish, the cement being furnished by the Cayuga Portland Cement Co. Square cold twisted bars are also used.

TO BE LONGEST CONCRETE BRIDGE.

The A. M. Blodgett Construction Company of Kansas City, Mo., have been awarded the contract for the erection of the new reinforced concrete causeway to be built between Galveston, Tex., and the mainland at Virginia Point. Bonds to the extent of \$500,000 have been voted by Galveston County and this sum is expected to cover the cost of the construction.

John Springer, secretary and treasurer of the A. M. Blodgett Company, stated that the causeway, when finished, would be the largest single piece of concrete work in the world. "The causeway will be 12,000 feet long and 70 feet wide," said Mr. Springer. "Each approach will be of concrete and 4,000 feet long. There will be a 100-foot Scherzer rolling ship span, and on either side of this fourteen arches each 70 feet long."

President A. M. Blodgett, of the company, has gone to Galveston. Work on the causeway will begin at once and it will be completed in eighteen months.

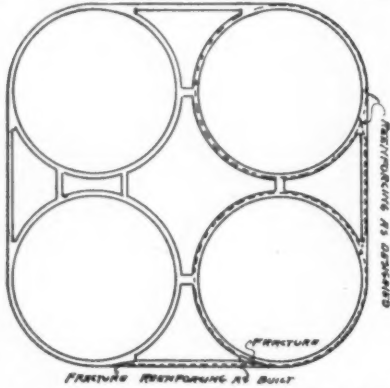
WILL GIVE LECTURE.

Joliet, Ill., Nov. 21.—The members of the Steel Works Club will be given a lecture November 23 by Dr. Johnson, of Chicago, who will talk on "Uses of Concrete." Descriptions of the many uses and processes of manufacture will be illustrated by stereopticon views, many of them taken in Europe.

CONCRETE ELEVATOR COLLAPSES AT SPRINGFIELD, OHIO.

On October 24, the lower half of the eastern wall of Ansted & Burk's new concrete grain elevator at Springfield, Ohio, collapsed, letting out about 5,000 bushels of wheat from the stock house on which it fell. The only warning was the sound of the cracking of the wall as the pressure of the wheat pushed it out.

This accident, rather than implying that concrete is not a safe building material, shows positively that it is much stronger than it is given credit for



PLAN OF ANSTED & BURK'S CONCRETE BINS AT
SPRINGFIELD, O.

being. The tracing reproduced accompanying this article shows the building as planned to consist of four cylindrical bins, 30 feet in diameter and 80 feet high, arranged so that the interspace between the four bins as well as the four outside spaces between the adjacent bins could be used, by enclosing the spaces with a straight wall joining the outside to the walls of the cylindrical bins. It was this wall of one of the outside spaces that gave way.

After the accident it was seen by examination of the concrete in the ruins that not one of the steel rods used in reinforcing this outside wall had been joined with the walls of the cylindrical bins as designed or carried around the corner and bent

into the opposite wall. Further, the concrete that fell, coming from the lower half of the structure, developed that the number of reinforcing bars used was not up to specifications, and the ones that had been placed were in such a position as to give no support to the concrete wall.

The contractor, the MacDonald Engineering Company, of Chicago, did the construction work in record-breaking time, working forces day and night continuously for three months. The continuous laying of concrete is necessary to a smooth, clean surface, and work must therefore be done at night. But the error in this case was on the part of the superintendent in charge of the work. Rods had been sent into this building during construction, but were never placed properly and bent into place.

The accompanying illustrations show different views of the concrete elevator and cooperage stock house, one view showing the section that fell. This mass of concrete, weighing several thousand pounds, fell on the stock house and the wheat that rushed forth created a vacuum in the structure and pulled the roof down cracking it in the middle. The collapsing of the eastern wall laid bare the inner walls which still hold up with their load of grain. Concrete is not given any consideration of strength in proportioning the wall, but in this case the naked concrete held the immense quantity of grain with its everlasting pressure for two months. During this time the four bins had been repeatedly filled and emptied with grain, which, in large shipments, was thrown against the side of the bin. The elevator has a capacity of 175,000 bushels and stands 110 feet in its total height. Experts have estimated that the structure, which contained 200,000 cubic yards of cement, would have stood forever with properly placed reinforcing bars of the specified number.

NEW CONCRETE TUNNEL AT CHICAGO.

The new concrete Washington street tunnel, at Chicago, Ill., will soon be in operation. The work on the tunnel was let in two sections, section 1 being 340 feet long, and section 2 1,196 feet long. The width of the tunnel is 40 feet, and the average depth from grade to the bottom of the construction is 170 feet.

Work on section 1 was started in June, 1909, and now both sections are completed and only need the rails and other equipment to be put in operation. In section 1, 4,680 cubic yards of cement were used, and in section 2, 21,000 cubic yards, making a total of 25,680 cubic yards of concrete used in the construction. Universal Portland cement was used throughout. George W. Jackson, Inc., of Chicago, Ill., were the contractors and builders.

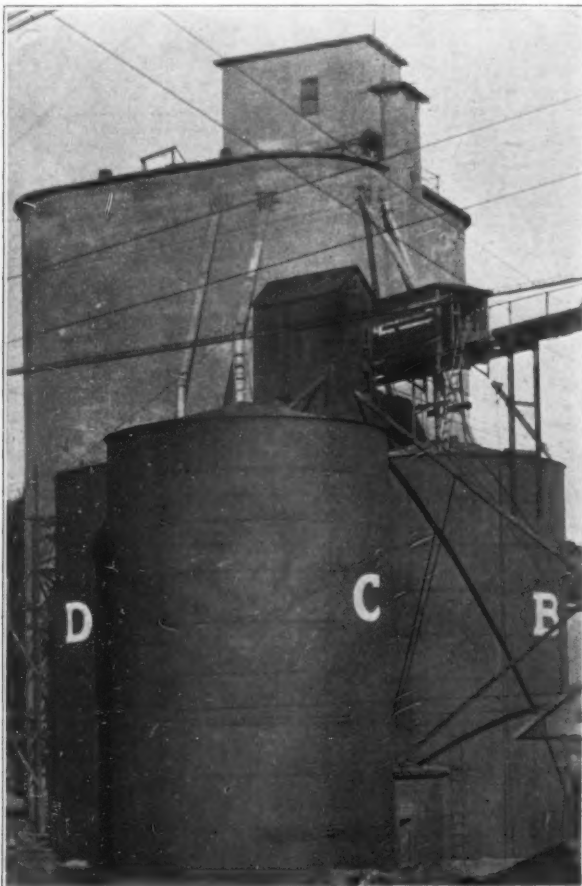


COOPERAGE STOCK HOUSE OF ANSTED & BURK CO. AT SPRINGFIELD, O.,
WRECKED BY FALL OF CONCRETE WALLS AND GRAIN.

E. A. WHITE GIVES TALK.

Urbana, Ill., Nov. 21.—E. A. White, of the University of Illinois, delivered an interesting talk on "How Work in Farm Machinery and Cement Construction May be Taught in the High School," November 18, before the annual convention of the high school superintendents, principals and teachers of Illinois.

The South Jersey Sand Company has been incorporated at Cape May City to deal in sand, gravel, stone, cement, etc. Their capital stock is \$25,000. Incorporators are C. L. Brownmiller, E. W. Lloyd and H. E. Richardson.



NEW CONCRETE ELEVATOR AND OLD STEEL
TANKS OF ANSTED & BURK CO. AT
SPRINGFIELD, O.



WRECKED WALL OF ANSTED & BURK CO'S CON-
CRETE BIN AT SPRINGFIELD, O.

CEMENT CONCRETE VATS AND TANKS.

By Albert Moyer, Assoc. Am. Soc. C. E.

Impervious, odorless, tasteless and sanitary vats and tanks for buttermilk, wine, oil, pickles, sauerkraut, etc., can be constructed of reinforced concrete, the reinforcing to be designed by a competent engineer, provided the interior surfaces are treated as follows:

After the forms are removed, grind off with a carborundum stone any projections due to the concrete seeping through the joints between the boards. Keep the surface damp for two weeks from the placing of the concrete. Wash the surface thoroughly and allow to dry. Mix up a solution of 1 part water glass (sodium silicate) 40° Baume, with 4 to 6 parts water, total 5 to 7 parts, according to the density of the concrete surface treated. The denser the surface the weaker should be the solution.

Apply the water glass solution with a brush. After four hours and within 24 hours, wash off the surface with clear water. Again allow the surface to dry. When dry apply another coat of the water glass solution. After 4 hours and within 24 hours, again wash off the surface with clear water and allow to dry. Repeat this process for 3 or 4 coats, which should be sufficient to close up all the pores.

The water glass (sodium silicate) which has penetrated the pores has come in contact with the alkalis in the cement and concrete and formed into an insoluble hard material, causing the surface to become very hard to a depth of $\frac{1}{8}$ to $\frac{1}{2}$ inch according to the density of the concrete. The excess sodium silicate which has remained on the surface, not having come in contact with the alkalis, is soluble, therefore easily washed off with water. The reason for washing off the surface between each coat and allowing the surface to dry, is to obtain a more thorough penetration of the sodium silicate.

It is obvious that concrete surfaces so treated, if hard, impervious and insoluble, have been made impervious, tasteless, odorless and sanitary.

PITTSBURGH CONCRETE NEWS.

Pittsburgh, Pa., Nov. 21.—Pittsburgh has been putting up very few large buildings this year and reinforced work on a large scale has been accordingly scarce. Some good requisitions are coming before contractors now, and if the bond issue work is started there are at least a dozen warehouses which will likely be built of reinforced concrete construction, most of them on the North side.

The most interesting job that has been let lately is the Denny five-story commercial building, at 29th and Liberty streets, for which Thomas Scott was the architect. The building was designed by engineers Irvin & Witherow, and is being erected by Benjamin Groah. It is four-stories high, and about 100x200 feet. It will be used for warehouse purposes and will carry a net live load of 250 pounds per square foot. The exterior is dark red brick laid in cement and raked out at the joints, and the trimmings will be cut stone. All floors will be No. 1 oak and columns are 16 feet 6 inches on the centers in all directions.

The interesting thing about the building is that it was originally designed for wall bearing slow burning construction, heavy pine timber to be used for beams, girders and columns. Estimates given were \$63,636 for fireproof construction and \$61,498 for slow burning construction. Both bids included elevators and electric wiring, but no plumbing or sidewalk. The fireproof bid was accepted. After excavating it was found that the soil was very poor and the footing would have to be lowered an additional six feet increased in size. The owners called off the contract and took bids for this additional work. The fireproof estimate was \$5,600 and the slow burning construction \$9,400, thus the ultimate saving to the owners by getting an absolute fireproof construction building is \$1,662. Owing to the antiquated building laws in Pittsburgh, the engineers had to use a 12-inch curtain wall, whereas a 9-inch wall in cement would have satisfied the owners and but for this ruling \$1,400 more might have been saved on the contract. The Trussed Concrete Steel Company also put in the floor work in the Haugh & Keenan storage warehouse at Centre and Euclid avenues, East End. They used a six-inch slab and three-eighths inch bars.

Phl & Miller recently secured the contract for building a reinforced concrete tipple, boiler house and other buildings for the Pennsylvania Coal & Coke Company, at Cresson, Pa., to replace their plant which was recently burned there. The same firm is completing several city contracts at Youngstown, O.

LOUISVILLE CONCRETE NEWS.

Louisville, Ky., Nov. 17.—Concrete workers in Louisville are still hard at it trying to close up the bulk of their work before bad weather sets in. It looks as though they will be able to work longer than usual, for they have hardly lost a day yet, the weather having been almost ideal.

The demand for concrete block work continues excellent and is really a feature of the market. Foundations are being made in increasing number of this material, while porches and porch columns are being ordered with blocks specified. There is lots of concrete work being figured on, and another big season is in prospect for 1911.

The Central Concrete Construction Company has secured the contract for the two-story white block stable to be erected for Judge George DuRelle. It will be one of the handsomest buildings of the kind in the city. P. S. Hudson, of this company, has returned from New York, where he attended a committee meeting of the National Association of Cement Users. Robert L. Morris, who has been connected with the company, has entered the real estate business.

Concrete workers in Louisville, and especially those who are interested in street construction, heard with considerable regret the announcement of the Board of Public Works of Louisville putting the ban on hydraulic cement for street work. Heretofore hydraulic has been used almost exclusively, and the business was the mainstay of the few mills which remained in Southern Indiana. It was stated, however, that hydraulic cement foundations under the streets "sweated," and that this caused the asphalt paving to rot.

The Floyd Manufacturing Company, of New Albany, Ind., has filed articles of incorporation. Its capital stock is \$10,000, and one of its plans includes the manufacture of concrete blocks.

The Hawesville, Ky., council has taken action in favor of the construction of concrete sidewalks all over the business section of the town, and these will be laid down within the next ten months.

A. Markham & Co. have been awarded the contract for the erection of the concrete cattle barns to be built at McBrayer, Ky., for J. T. S. Brown & Son, distillers, of this city. The structure will be unusually large, and will have accommodations for about 750 cattle. The cost will be \$25,000.

The Mansfield Engineering Company, of Indianapolis, Ind., which has the job of concreting the floors of the water company's reservoirs, is said to be having trouble with the preliminary work, removing the mud from the bottom of the structures. The stuff is the accumulation of years, and is of a jelly-like composition which is hard to handle. Unless heavy rains set in, however, it is believed that the contractors will be able to get the floors in shape for an early beginning of the concrete work. This end of the job is rather simple, consisting only of the putting down of a solid floor of concrete. No reinforcing is required, as there is comparatively little strain upon the composition.

TWIN CITIES CONCRETE NEWS.

Minneapolis, Minn., Nov. 18.—The time of annual Thanksgiving is at hand, with its invitation to cast up the accounts for the past season as well as to take a forward glance as to what may be anticipated for the future. The season, on the whole, has been a fairly satisfactory one. With the dissatisfaction which has been ruling, on the high cost of everything, including living, the political unrest and dissatisfaction which was demonstrated in the late election, and a prevalent feeling of waiting for a readjustment of things, it is remarkable that there has been as much new building as the season has shown. In many ways the past year has been a very good season. It was fairly free from labor trouble, and had more good sized work in the first half than seemed likely early in the year. Lately there was a letup, but even that is being overcome, and some heavy work is again in view. Naturally, anything that is not started by this time will go over until next spring, unless there is urgent need for the structure. The fact that good sized structures are being considered is a good indication that the expectation for spring is not wholly dull.

Cement and concrete construction in the various lines has been quite as active during the season as ever, and the prophesied lost faith in the form of construction is still to come. Minneapolis, in particular, has hardly built a structure of any size that is not of reinforced concrete construction. The most notable example is the Plymouth building,

which is said to be the largest reinforced concrete structure yet built, being twelve stories, about 187x260 feet in size. St. Paul has been divided between reinforced concrete and steel frame with hollow tile fireproofing. Still reinforced concrete has been well represented in St. Paul's new work of the season.

An interesting instance of the use of concrete in ornamental work is to be seen in the public drinking fountain erected by Maurice L. Rothschild & Co., Minneapolis clothiers, outside their store, at the curb line. It is in vase form, formed in concrete, and has four sanitary bubbling fountains for the benefit of the thirsty. It is a decorative and useful article.

William Pierce Cowles, a consulting engineer of Minneapolis, has devised what he terms a cantilever system of concrete construction as a means of avoiding the crown heads which have been used in other systems of concrete construction upon columns. This is for the purpose of forming a square junction between the column and the ceiling slab. To attain this end, he has devised a cantilever effect, formed by the use of a reinforcement rod which engages in an electric welded ring set in the column head. A system of offsets in the rods causes them to counterbalance tension and shear.

One more point in favor of concrete construction recently developed in Minneapolis, in the wholesale dry goods warehouse of Tibbs, Hutchings & Co. The building, foundations, basement and all, is of reinforced concrete construction. It was recently observed that a smell of gas pervaded the building. It was very elusive and could not be found, although plumbers and others tested and searched through all the joints and pipes. Finally it was discovered by an inspection of the extra coal bin, that spontaneous combustion had taken place, and a fire was smoldering away in a bin of 225 tons of coal, and had been going on for several days. The concrete walls, and the concrete floor slab overhead, confined the fire to that bin, in an impenetrable space and nothing suffered, except the coal.

Lowell A. Lamoreaux, of the architectural firm of Long, Lamoreaux & Long, Minneapolis, will present a suggestion to the next meeting of the American Institute of Architects, looking to a further encouragement to the construction of fireproof construction. His suggestion is extremely logical and consists of securing laws whereby the taxation rate upon fireproof buildings may be made appreciably lower than the rate on non-fireproof construction. The plan is in effect in Vienna, where an owner who replaces an old building with a modern fireproof structure is given the encouragement of an exemption from taxation for a term of years. If the suggestion could be worked out, it certainly ought to prove a sufficient inducement to make a great many more buildings of fireproof construction.

Bids close Nov. 28 at the office of the state board of control in St. Paul, for the erection of two buildings for the College of Engineering of the University of Minnesota, at Minneapolis. One will be of reinforced concrete construction, brick exterior, with Indiana Oolitic limestone trimmings, etc. Clarence H. Johnston, architect, St. Paul.

The Bailey-Marsh Co. has the contract for an addition to the malting house of the Electric Malt-ing Co., of Southeast Minneapolis. It will be of brick, steel and reinforced concrete construction. Cost, \$15,000.

The Cameron Transfer & Storage Co., of Minneapolis, will erect a four story brick and reinforced concrete addition to its warehouse at Eighth Avenue North and Fifth Street, in Minneapolis. The work will be done by the day. Cost, \$16,000.

Drewry & Sons, of St. Paul, will erect an addition to their bottling works, three stories and basement, 30x60, reinforced concrete construction, to cost about \$10,000. A. H. Wheeler, of St. Paul, is the architect.

Paul F. Hein, who was formerly in the architectural office of Harry W. Jones, Minneapolis, is now with the estimating department of the Barber Asphalt Paving Co., in Minneapolis.

William A. Elliott, of the general contracting firm, the J. & W. A. Elliott Co., Minneapolis, was married recently to Miss Bernice B. Homer, of Minneapolis. They are spending the winter in the east and south.

The Minnesota experimental station has been conducting a series of tests in farm tile drainage on the McMillan 80-acre farm near Winnebago, Minn., under the direction of Professor Stewart, of the state farm, St. Anthony Park, St. Paul. Similar experiments are being conducted across the line in Northern Iowa, under the direction of the Iowa experimental department.

The C. A. P. Turner system of mushroom reinforced concrete construction will be used in the Gogebic water works building to be erected at

Duluth, Minn., to cost \$40,000, and also for the George Fowler garage and warehouse to be erected at Fargo, N. D., to be 75x100 feet.

Theodore F. Curtis and Frank J. Mackey, the latter of London, Eng., will erect a family hotel building in Minneapolis, at Third Avenue South, from Tenth to Eleventh streets. It will be ten stories and basement, 330x130 feet in size, of reinforced concrete construction, Coon Creek brick exterior walls, with terra cotta and cut stone trimmings, etc. The Leonard Construction Co., of Chicago, received the contract for the foundation work. Lindstrom & Almars, architects, of Minneapolis, drew the original plans, which have been modified and changed somewhat.

The board of police commissioners of St. Paul proposes the erection of a police station, to contain offices for the municipal court and health department. The cells will be of concrete construction. Mayor Keller has recommended that it be formed on the modern office building lines, to the end of having additional stories built later, as their need becomes apparent. The present structure, as proposed, will cost about \$250,000.

Lauer Bros. received the foundation contract for the new building which the Sisters of St. Bernard will erect at Rose and Woodbridge streets, St. Paul, at \$4,065 for that part of the work. The superstructure will be let about Jan. 1. John F. Fischer, architect, St. Paul.

The Bailey-Marsh Co. received the general contract for the erection of the Fawkes garage to be erected on Hennepin Avenue and Sixteenth street, Minneapolis. The Turner system of mushroom concrete construction will be used in this building.

GRANITE FACED BRICK.

A letter from H. C. England, manufacturer of concrete posts, building blocks and pressed brick at St. Francisville, Ill., says that Rock Products impresses him as being a very good trade journal and that he is greatly pleased to receive it every month. In regard to his business Mr. England says he is now planning to make a brick faced with crystal granite grit, a facing material put out by the Thompson Architectural Company, and that he is also to try some of the waterproofing products advertised in Rock Products. He further says: "The Brian-McMurry building in St. Francisville, of which you made mention in your article, is nearing completion and it is greatly admired by every stranger who visits our little city, and many of them come to my plant to get information as to the construction of the brick."

CHICAGO PLANT BURNED.

A \$10,000 fire loss was suffered recently by V. B. Wyers, manufacturer of concrete paving blocks at 5727 West Chicago Avenue, Austin, when his plant was completely destroyed by fire.

The Concrete Appliance Company incorporated at Los Angeles, Cal.; capital stock, \$500,000. Incorporators, F. O. Engstrom, Fred E. Engstrom, Oliver A. Staudt, J. Gysin, and G. T. Hickley.

The St. Louis Concrete Machinery Company has been incorporated at St. Louis, Mo., to manufacture and deal in concrete material and machinery. Capital stock, \$50,000. Incorporators, Breckenridge Morehead, R. L. Gurney, and George W. Parish.

The South Omaha Stone Manufacturing Company has been incorporated at Omaha, Neb. Capital, \$10,000. Incorporators, Joseph H. Saunders and N. E. Carter.

VERY PROSPEROUS YEAR.

Atkinson, Neb., Nov. 21.—W. A. Wheeler, of this city, manufacturer of concrete building blocks and dealer in Portland cement, reports a very prosperous year in the trade in his territory. Mr. Wheeler said: "The cement business here is all one could ask. I have been very successful the past year and have had many good orders to fill."

We are printing in this issue a photograph of W. A. Wheeler's concrete plant at Atkinson. This plant is modern and fully equipped in every way.



W. A. WHEELER CONCRETE BLOCK WORKS.

CENTRAL ILLINOIS CONCRETE NEWS.

Springfield, Ill., Nov. 21.—Concrete work on the New Leland Hotel, for which Culver & Company have the contract, is finished and the big building is assuming an appearance of completion.

Taft Brothers, of Chicago, were granted articles of incorporation by Secretary of State Rose to do a general contracting business. The incorporators are James M. Taft, R. H. Taft and Edwin Pugh. The concern is authorized to issue \$50,000 in capital stock.

The largest concrete bridge ever designed by the Illinois State Highway Commission will be built at Gardner, Ill., by W. H. Shons, the concrete contractor of Freeport, Ill.

Removal of 1,100 cubic yards of concrete by blasting will be a part of the work on the new hydro-electric station of the Northern Illinois Light and Traction Company on the Des Plaines River at Marseilles. The L. E. Myers Company, which has the contract, is to build a concrete bridge across the river to be used for railway purposes and to support the tracks in flumes leading to twelve turbine wheels. The power house will be on a concrete foundation on a bed of shale.

John P. Bly, of Fulton, is building a cement block addition to his cement block factory and will install a steam drying apparatus.

The Culver Construction Company, of Springfield, with its revised bid of \$56,069, will erect the new federal building at Litchfield.

O. W. Wahl, of Churdan, Ia., has purchased the plant of the Webster City Cement Pipe & Tile Company at Webster City, Ia., and will probably start operations in a short time.

The Cunard-Lang Concrete Company, of Columbus, O., have been awarded the contract for the concrete work on the \$100,000 high school building to be erected at Monroe, Mich.

Ringsted, one of the hustling towns of Emmet County, Iowa, is soon to have a cement and tile factory. Thomas Doughty, of Armstrong, C. B. Murtagh, Dr. Thompson, A. Rice, and A. T. Fox of Ringsted, are stockholders. The capital stock is \$20,000.

L. J. Kalvig, of Kanawha, Iowa, has opened a plant for the manufacture of cement building blocks.

The Crow Motor Car Company, of Elkhart, Ind., will erect three new buildings, each 40x80 feet, one story high. One will be of brick and the others of concrete blocks.

The Eldora, Iowa, city council has passed an ordinance requiring all new walks laid to be of concrete.

Charles Wood, of Cedar Falls, Iowa, has purchased property on Walnut street which he has converted into a plant for the manufacture of cement blocks.

C. W. Parker, head of the C. W. Parker Carnival Companies and the company bearing his name which manufactures amusement riding devices, is moving from Abilene, Kan., to Fort Leavenworth, Kan., where all the buildings will be of concrete. Even the fences will be of concrete.

L. W. DeWitt & Sons, Jefferson, Ia., are having a building erected which is to be used for the manufacture of concrete blocks, fence posts, porch columns, etc.

MCCORMICK WATERPROOFING COMPOUND USED.

When the LaSalle street tunnel is completed, which probably will be some time next year, it will contain 35,000 cubic yards of concrete. It will take 50,000 barrels of Marquette Portland cement to complete this work. Somewhere near 8,000 barrels of this cement have been used up to the present time, and waterproofed with the McCormick Waterproofing Compound. Nearly 8,000 pounds of this waterproofing compound so far has been mixed with the concrete to attain the desired effect. The proportion of the waterproofing compound of the McCormick Waterproof Portland Cement Co. of St. Louis, Mo., mixed with concrete is 10½ pounds to each barrel of cement or 15 pounds to the cubic yard. It is estimated that fully 55,000 pounds of the McCormick Waterproofing Compound will be used in the concrete applied in the tunnel. The railway company's chemist, after a thorough test covering a period of three weeks, found it satisfactory and the division engineers of the Chicago Railways Company decided upon its use. Work upon the tunnel is progressing satisfactorily and it is expected that it will be completed some time next year. While the M. H. McGovern Company, general contractors, have pushed the work with great energy, unavoidable delays have occurred and likely may occur before completion, which makes it difficult to state the exact date of completion. The Chicago Railways Company is rebuilding the LaSalle street tunnel and paying for it.



MEET IN CHICAGO.

The Executive Committee of the Illinois Clay Manufacturers' Association, at a recent meeting held in Chicago, voted unanimously to hold its Thirty-third Annual Convention at Chicago, January 17, 18 and 19. Headquarters will be at the Palmer House.

One large room for exhibits will be provided, so that each manufacturer can show its ware. This room will be adjoining the main hall. Committee rooms and lounging parlors are all provided.

The local Entertaining Committee will furnish a splendid banquet to all visiting guests, as well as arranging sight-seeing parties. Ladies are invited to attend the convention, and special arrangements will be made for their entertainment.

George H. Hartwell, 303 Dearborn street, Chicago, is the secretary.

ERECTING LARGE FIRE BRICK PLANT.

A large storage building has recently been completed at Ashland, Ky., for the Ashland Fire Brick Company. The building is 300 by 80 feet, with a solid concrete floor, and will hold approximately 5,000,000 brick.

The thirteenth annual meeting of the American Ceramic Society will be held at Trenton, N. J., February 14 to 17, 1911, inclusive. "This meeting," said Edward Orton, Jr., secretary of the board of trustees, "will be before a somewhat critical audience, but we hope to adequately represent our organization and show them some things."

Joseph V. Frnka, organizer and former secretary and treasurer of the Colorado Gravel Company, writes that he is about to open a gravel pit and install a gravel screening, washing and crushing plant at Fayetteville, Tex., and would like to correspond with manufacturers of machinery in regard to the same.

The Des Moines Clay Manufacturing Company, Des Moines, Ia., has increased its capital stock from \$35,000 to \$150,000. The company has been established in Des Moines for only two years, and has met with great success. It has manufactured a brick with a patented air chamber, upon which improvements were made this year. An expenditure of \$115,000 will be made in enlarging the plant.

The plant of the Yoke Vitriified Brick Company, of Coffeyville, Kas., was recently sold at auction by the trustee in bankruptcy to Frederick B. Wood, of Adrian, Mich., for the sum of \$36,000. Mr. Woods' bid was slightly more than one-half of the appraised value, while the plant represents an investment of \$24,000. It is understood that the plant will be opened as soon as the details can be arranged and will give employment to a number of men.

The Independence Brick Company, of Independence, Kas., started up recently, and the first test kiln of building brick proved entirely satisfactory. Harry Jieneke is the manager of the company.

The Calhoun Clay Products Company, of St. Louis, has been incorporated. Capital stock, \$100,000, fully paid. Incorporators, Charles P. Tiley, of Belleville, Ill.; R. F. Hickman, A. T. Groesbeck, M. T. Byrne, and others, of St. Louis. The company will engage in the manufacture of clay products.

The Acme Brick & Tile Company, of Kansas City, Mo., has been incorporated. Capital stock, \$30,000. Incorporators, K. C. Buckeye, C. A. Branner, H. L. Mason and others.

The National Stone Brick Company, of Kansas City, Mo., has been incorporated. Capital stock, \$25,000. Incorporators, John D. King, James B. Turner and Dickson C. Collier.

The Gulf Coast Brick & Tile Company, of Brownsville, Texas, has been incorporated. Capital stock, \$25,000. Incorporators, C. W. Winstedt, E. F. Johnson and A. A. Browne.

SAND AND GRAVEL

UNIQUE FEATURES

Presented in the Operation of the Joliet Sand and Gravel Company's Plant, Where Gravel is Excavated Below Water Line.

The series of articles on Modern Gravel Washing Plants that have appeared in ROCK PRODUCTS during the past few months have been, in each case, plants in which dry bank-run gravel was washed and sized, and therefore, the plant of the Joliet Sand & Gravel Company will now be of interest, since in this plant gravel excavated below the water line is prepared for the market.

The above plant is located on the Elgin, Joliet & Eastern Railroad, about one mile below Plainfield, Ill., or approximately midway between the cities of Aurora and Joliet, and within easy reach of the Chicago market.

The gravel in this deposit lies below water line and varies in depth from 17 to 25 feet. Above water line there lies a strata of gravel about 10 feet in thickness, which was, however, removed by steam shovels and shipped raw prior to the building of the washing plant. The gravel in this pit is comparatively clean, and washing is not so necessary for cleansing purposes as for sizing, although, of course, what soil or foreign matter there is in the gravel is removed in the washing and the quality of the gravel thereby improved.

The gravel is excavated by a Page Drag Line Excavator, moved ahead by its own power and leaving behind it a lake varying according to the depth of the gravel. Standard gauge tracks run parallel with the drag line trench and the excavator fills drop bottom ballast cars spotted along this track. The excavator has a boom 60 feet in length and cuts most economically a trench about 90 feet in width. But two men are required for operating, an engineer and a fireman, and the capacity runs from 800 to 1,000 cubic yards per day of ten hours.

The gravel cars are hauled from the excavator to the washing plant by a 40-ton four-wheel locomotive, and on arriving at the plant run up a 3 per cent grade and over a concrete hopper of 50 cubic yards live capacity. Beyond the hopper the track descends on a 4 per cent grade down to the main pit track level and thence back to the excavator, thus completing the circuit and keeping all equipment moving in the same direction at all times.

The gravel flows from the hopper onto a 30-inch inclined Stephens-Adamson belt conveyor, conveying and elevating same to the head of washing plant, some 70 feet above ground line and 160 feet distant from hopper track. Here the stream of gravel divides and flows to the head screens of two rows of 36" and 54"x72" Gilbert screens, each row consisting of four screens and having perforations $2\frac{1}{2}$ ", $1\frac{1}{4}$ ", $\frac{1}{2}$ " and $\frac{1}{8}$ " diameter respectively. The oversize from the first screens falls through a chute to two No. 5 Gates crushers located under main conveyor trestle across loading

track from washing plant. The crushed gravel falls from the crushers onto a 24" Stephens-Adamson belt conveyor inclined and running in an opposite direction to main conveyor, thus conveying, elevating and dumping this crushed product onto main conveyor at a point about midway of its length, from where, of course, it is returned to head of plant by the main conveyor.

The undersize from last screen flows to automatic settling boxes, which extract the sand and reject the water and foreign matter washed from the gravel, this being sluiced to a spill-pond near by.

The upper works of the plant, consisting of main conveyor head and screens, are driven by an American System Rope Drive from the main line shaft of plant, located under main conveyor trestle in front of crushers. The crushers and return belt conveyor are likewise belted to this countershaft, as is also the centrifugal pump which forces water to the head of washing plant.

The power house is situated about 20 feet to one side of main conveyor trestle, and above line shaft is carried on concrete piers into power house, where it receives power by belt from a 200-H.P. Porter-Allen Automatic Engine. Steam for the engine is furnished by a 300-H.P. Heine Water Tube Boiler, and a very modern system of auxiliary power apparatus, embracing heaters, feed pumps, etc., are provided, making the plant most economical in every way. The power house building is of timber frame construction, covered with heavy corrugated iron and well provided with windows in side and end walls.

The belt conveyor trestles and screen framework are of timber construction, but the storage bins are of steel and consist of round steel tanks 18' 0" diameter and varying in height from 29' 0" to 42' 0". These rest upon concrete foundations and have two gates and loading chutes each, on each side, for loading railroad cars. Steel bins, while more expensive than timber, have the advantage of being more durable and hence are warranted where a plant is expected to operate for a great many years.

Loading tracks each over a mile in length are provided on either side of bins, giving ample track room for both loaded and empty cars.

A small shop, capable of caring for ordinary repairs of plant and excavator, is situated just south of the power house, adjoining which is the plant office building.

The plant has been in operation some two years and under the able supervision of Edward Renwick, maintains a constant output of 25,000 cubic yards monthly, or about 800 cubic yards daily, with a crew of from ten to twelve men, depending upon the amount of new track work in the pit, and we believe holds the record for low cost of production and continuity of operation.

The plant was designed by the J. C. Buckbee Company, engineers, of Chicago, Ill.

Twenty-five cars of gravel daily is being hauled from the Chicago & Northwestern Railway pit at Galt for the Macoupin County Railway, which is to put into use a line connecting with the C., B. & Q. at Girard, Ill.

The National Sand Company has been incorporated at East Gary, Ind. Capital stock \$10,000. They will do a general sand and builders' supply business. Incorporators, George Earle, William Earle and John J. Earle.

CHICAGO SAND AND GRAVEL NEWS.

Chicago, Nov. 21.—If anything, conditions in the sand and gravel industry of this city have shown improvement over those of the month previous, which were considered excellent. Business has been brisk and every concern in the trade has had all the business it could take care of during the last two months, and this condition is assured to continue until colder weather sets in. It is said there is more work in sight this winter than there has been in years and the outlook is spoken of as very encouraging. More sand and gravel has been used this fall than usual, which is attributed partly to architects, engineers and contractors commencing to specify this material, especially in reinforced concrete. Prices have advanced from the low level of several months ago and continue to show an upward tendency.

"Business was more than brisk the past month," said J. S. Putney, of the Lake Shore Sand Company. The demand has become greater every week since September and we have had all the business we can take care of. It has also become more noticeable that architects and engineers are specifying sand and gravel more than formerly, as well as contractors, finding that other material used in concrete does not produce as good results. This new condition, added to the usual activity always felt in the fall season, has greatly increased the use of sand and gravel. Prices are better, are firm, and have an upward tendency. Conditions in the trade are satisfactory and we feel that the outlook is bright."

"In the last two months we have had as much business as we could handle," said F. M. Richardson, president of the Richardson Sand Company. "The transition from dullness and depression to great activity in the sand and gravel trade has been rapid and growing since August. Greater quantities of sand have been used this fall than last year during the same period. Prices are decidedly better and showing an upward tendency. Every thing looks brighter in the sand and gravel trade."

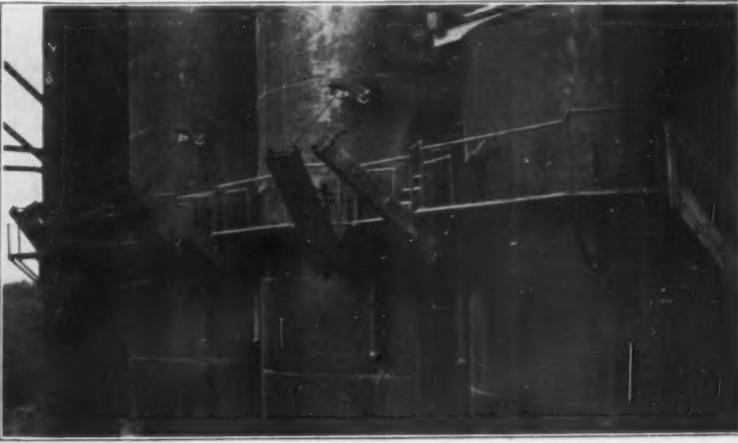
"We have had as much volume of business as we could attend to during the last six weeks," reported P. M. Lewis, secretary and treasurer of the American Sand & Gravel Company, "and we were exceedingly pushed to supply the continual increasing demand. There is more sand and gravel used this fall than formerly, especially in reinforced concrete, for the reason that it is the best material to produce the best results in concrete. Prices have advanced since August, are firm, with an upward movement."

"There is more work in sight for sand and gravel men this winter than there has been in many years," stated E. S. Davis, of the Atwood-Davis Sand Company. "We have practically as much work as we can take care of. We have found ourselves in this condition for nearly two months. Prices are decidedly better than they were several months ago and show a strong tendency upward. Conditions in this industry are good and outlook very encouraging."

CALLED TO TESTIFY.

Ottawa, Ill., Nov. 21.—J. B. Herring, of the Ottawa Silica Company was called to testify before the State Park Commission as to the value of sand land in this vicinity. The state wishes to purchase the Starved Rock property, together with the silica sand, cement rock and rights.

Edgemoor Sand & Gravel Company has been incorporated at West Pittsburg, Pa. Capital \$40,000.



GRAVEL PLANT, JOLIET SAND & GRAVEL CO., PLAINFIELD, ILL.

NEW YORK SAND AND GRAVEL NEWS.

New York, Nov. 15.—Sand and gravel continue to do an extraordinary business, always increasing. The prices, however, are unchanged. Cow Bay sand, which is generally specified, sells at 35c per cubic yard, alongside piers. Gravel sells at 75¢@80¢ per cubic yard, according to grade. White quartz sand and gravel sells at \$1.00@1.50 per ton.

The retailers are not satisfied with these prices, but find the volume of business done so good that they make small complaint.

Mr. J. N. Ely, of the Crescent Sand and Gravel Co., 1 Broadway, said that as far as the volume of business was concerned, there was nothing at all to complain about on the part of the New York dealers. "The trouble is," he said, "that we can't get enough for the stuff. A few years ago we got easily 65 cents for it; now the best we can do is 30 cents or 35 cents. And this price has held steadily for two years. It is thought now that a change is due, and it is looked for by next spring as soon as increased building operations begin. This opinion is general throughout the trade, and that is the best reason for believing that it will come. If the New York dealers would all agree to it, it would of course come, but as a formal agreement is impossible, we have to depend on a slowly crystalized opinion."

The Goodwin Sand & Gravel Co. spoke through its enthusiastic and well-informed manager, John C. Timmerman, who declared that the demand for both sand and gravel was greatly increasing, and that, the prices being at the lowest ebb, the market was bound to take an upward turn before long. As to the increases, Mr. Timmerman said: "There is a strong demand now for gravel and sand for paving, roofing and (sand) blast. The 'White Quartz' sand from Long Island is much in demand for cleaning oil tanks, and warships and other iron-clads. One man with a sand-blast machine can do the work of a large number, scraping off the rust and barnacles by the old methods. The large building enterprises in New York are responsible for much of the increase this year. The large amount of concrete specified in all work nowadays caused an increase of from ten to twenty percent in the sand and gravel business this year. The Pennsylvania railroad terminal works here and in New Jersey and on Long Island, the Grand Central depot operations, and such buildings as the Whitehall, now going up, are samples of the kind of work that is providing for the great volume of business our trade is now doing. Ten years ago we handled in this city about 400,000 yards of sand per year. This year it will amount to between two and a half and three million yards. Of this amount at least one-tenth was disposed of during the month of October. There is about five million dollars invested in the sand and gravel business in New York City, and the capital investment is rapidly increasing. All existing plants are increasing their capacity and operations, while newcomers are always putting in their appearance. The competition has grown very keen, because the volume of business is known to be expanding, and every man thinks that the sand business is easy enough for an amateur. The outward aspect of it is so simple that it invites newcomers. It is the competition that is keeping down prices and profits in what ought to be a very lucrative business. That new comers are not needed can be seen from the fact that the companies now in the business could take care of twice the volume of trade with existing facilities."

WEST COAST SAND AND GRAVEL NEWS.

San Francisco, Cal., Nov. 16.—The Golden Gate Brick Company, which has for several years operated a sand-lime brick plant and sand beds at Antioch, Cal., and a pressed clay brick plant at Stockton, has recently acquired an interest in a number of other sand and gravel pits, and in a sewer pipe factory. L. H. Pratt, formerly manager of the Tuolumne Lumber Company at Modesto, Cal., has taken a position as sales manager for the Golden Gate Brick Company. He is a brother of C. F. Pratt, manager of the concern, with offices in San Francisco. The company is doing quite an extensive business in the Antioch sand, and is preparing to go after the gravel business in a large way. Mr. Pratt says that the sand-lime brick business is quiet in San Francisco, but fairly active in the country, where this material has gained considerable popularity for public buildings.

Parties residing at Redlands, Cal., have purchased 15 acres of gravel land near Long Beach, Cal., and will develop a pit, from which they will furnish washed gravel.

The old tugboat *Monarch* has been purchased by Charles Peterson, who will use her as a barge for transporting gravel around the Bay.

The Yorba Gravel Company has been incorporated at Los Angeles, with a capital stock of \$20,000, by F. J. Sheehan, L. P. and R. B. Stephens.

Quite a stir was caused last week among the gravel dealers of Portland, Ore., who have been obtaining the material by dredging in the Willamette river, when their operations were stopped by Major McIndoe, of the United States Engineers. Orders were issued some time ago to prevent the dredgers from dumping the boulders and screenings back into the water, and on November 1 six of the companies suspended operations. The concerns which closed down were the Columbia Contract Company, Star Sand Company, Nickum & Kelly, Columbia Digger Company, Portland Sand Company and the Western Towing & Transportation Company. They have appealed to the Chamber of Commerce to intervene in their behalf, and in the meantime construction work is being greatly hampered.

The Star Sand Company is now preparing to install improvements which will enable it to continue operations in compliance with the order, and has let a contract for a dredge of an entirely new type. It will be 140 feet long, 36 feet beam and 7 feet deep, and will be able to dredge to a depth of 50 feet. It will be equipped with four steam winches, enabling it to fill four barges at once. The material will be separated into four grades, sand, roof gravel, pebbles and boulders. The latter will be taken to the company's plant and crushed.

OHIO RIVER SAND COMPANY.

Louisville, Ky., Nov. 17.—The Ohio River Sand Company, one of the city's most noted institutions, has added to its equipment in the form of a modern



OHIO RIVER SAND COMPANY PLANT AT LOUISVILLE, KY.

office building, which is a credit to itself and the business.

The structure is of pressed brick and concrete construction, two stories in height and supplied with steam heat, toilet, and all other conveniences. The weighing office is, of course, on the first floor, while the bookkeepers' quarters, along with the private office of John M. Settle, secretary and treasurer, are located on the upper floor. The offices are fitted up with handsome quartered oak furniture, and make a splendid appearance.

Inasmuch as the company has recently added to its holdings by the purchase of an additional interest in Towhead Island, which it now practically owns, those in charge of its operations feel that it is in a position to do business just about right.

Its equipment for handling sand after it leaves the digger is complete, including all labor-saving devices known to the trade, and the company has the reputation of handling more sand and gravel than any other concern in this section.

T. J. Duff is president, and Mr. Settle is the only other officer.

FIRM CHANGES HANDS.

Grayville, Ill., Nov. 21.—Malcom Eastwood, for several years in the sand and gravel business, has sold his farm of 231 acres and business to the Blood Sand & Gravel Company, composed of S. H. Blood, Jr., and son, Paul R. Blood, for \$20,000. The deal includes a large sand and gravel bar in the Wabash River, dredge and barges and also a ferryboat. Paul R. Blood will manage the business.

The Silica Brick Company has been incorporated at Sacramento, Cal., with a capital stock of \$250,000. Incorporators are L. C. Brinkmeyer, S. W. Winsor, J. P. Dargitz, B. F. Walton and George W. Pierce. They will manufacture and deal in all kinds of building materials including sand-lime brick.

PITTSBURGH SAND AND GRAVEL.

Pittsburgh, Pa., Nov. 21.—The East Liverpool Sand & Gravel Company, of East Liverpool, Ohio, last week secured the contract for a \$55,000 twin reservoir at Binghamton, N. Y. Phil Morle, superintendent of the company, has gone on to Binghamton to start the work. This same concern secured a \$60,000 similar contract at Amherst, Ohio, last summer, which it has just completed.

The Ridgeview Sand Company has been formed at Oil City, Pa., by C. W. Colter and Ralph L. and William J. Rhoads, of that city. It will mine, quarry, crush and sell silica sand, silica sand rock and stone, and also manufacture tile and brick therefrom.

The Iron City Sand Company is working four or five boats on the Alleghany river, but is not doing any double turn stunts. It also has some boats working on the Ohio river. The company is delivering most of its products at present in the Pittsburgh district and is making no shipments southward.

The National Sand & Gravel Company, which deals in river sand and gravel exclusively, reports that it is working about the same number of boats and flats as last year. These, however, are doing only single turn. Trade in general has been rather quiet, but the officials rely upon the bond issue to bring up that business very rapidly when the work is started.

The Government has decided to have a big sand hill in the Ohio river, near Neville Island, dug out. The Rodgers Sand Company has been working some boats in this locality this fall and the big bar, which has been a hindrance to boats for many years, will be removed as fast as possible.

MILWAUKEE SAND AND GRAVEL NEWS.

Milwaukee, Wis., Nov. 20.—Among a pile of some thousand tons of screened gravel in the capitol park at Madison, Wis., state experts and mineralogists claim they have found rough diamonds and various other precious stones. This gravel was all furnished by the Janesville Sand & Gravel Company, of Janesville, Wis., and as a result of this announcement a great deal of excitement has been aroused in the vicinity.

During the past summer more sand and gravel have been used at Appleton, Wis., than in any other previous year. Inquiry among the retailers disclosed the fact that between 500 and 600 carloads, averaging thirty cubic yards to the car, have been used in the various construction work.

SAND THAT NEEDS TESTING.

At a recent discussion held by the Boston Society of Civil Engineers, J. R. Worcester strongly indorsed the recommendation made by the joint committee on concrete that all sand to be used on any job should be tested in mortar briquettes along with the cement to see what tensile strength will be developed in a seven-day period and how that strength compares with the tensile strength of mortar made from standard sand. Mr. Worcester had occasion in the winter of 1908-09 to pass upon many kinds of sand from different places and had in the specification that rule of the joint committee, that the sample should develop 70 per cent of what the same cement would develop with standard sand. This proved satisfactory, he stated.

In Boston good sand is one of the hardest things to obtain and a great deal of what is being used and what has been used in the past is mighty poor. Some of it which looks all right and which will wash all right—and, Mr. Worcester believes, will pass a fair granulometric test—will make a mortar or concrete which oftentimes is condemned because it is poor concrete, and it is not the fault of the cement, either.

A building permit was issued in Milwaukee, Wis., last month to the United States Gypsum Company, for the erection of a \$15,000 factory building at the foot of Grove street, in that city. The building is to be of brick and will be two stories high.

The Massachusetts Sand-Lime Brick Company has been incorporated at Boston, Mass., with a capital stock of \$50,000. Incorporators, president, Frank W. Blair, Brookline, Mass.; treasurer, C. Mody Ryan; clerk, Charles P. King, both of Boston.

The Columbia Silica Company claims many advantages for their product, sand-lime brick, manufactured at Portage, Wis. They have a modern plant there and the demand for their brick is good.

McGrath Brothers, of the Mackinaw Sand & Gravel Company, of Lincoln, Ill., recently landed a contract to furnish 160 cars of gravel for a Peoria paving contract.



The National Lime Manufacturers' Association

Meets Semi-Annually.

William E. Carson, Riverton, Va. President
A. Newton, Chicago. First Vice-President
F. M. Palmer, Jr., New York. Second Vice-President
F. P. Hunkins, St. Louis. Third Vice-President
C. W. S. Cobb, St. Louis. Treasurer

Official Organ, ROCK PRODUCTS.

PROCEEDINGS HAVE BEEN MAILED.

Copies in pamphlet form of the proceedings of the last meeting of the National Lime Association, held in Pittsburgh, January 26-27, 1910, have recently been mailed by the president of the association to all of its members. The papers which were read before the convention will prove very interesting matter.

COMPLETED LAST SHIPMENT.

The Kritzer Company has just completed its last shipment of machinery for the plant of the International Lime Company, which is being erected near Seattle, Wash., and hope to have the plant in operation by the first of January next. The plant will be up-to-date in every respect, and will be operated by electric power. This plant will be operated on 98 per cent lime, being of exceptionally high quality.

PITTSBURGH LIME NEWS.

Pittsburgh, Pa., Nov. 19.—Prices on ordinary lime in Pittsburgh are badly shot to pieces. All dealers agree that competition is very sharp and quotations are being made which do not leave the dealer a fair margin of profit. Prices are down now about ten cents a barrel less than three months ago. Most of the lime sold in Pittsburgh is the rock wall lime which comes from Ohio. Considerable white rock lime is also being handled here, Houston Brothers leading in this line. The country trade demands many different varieties and city salesmen are usually disposed to give these dealers about what they want.

The National Mortar & Supply Company, whose big plant is located at Gibsonburg, Ohio, increased the capacity of its operation there fully 75 per cent in August and is still away behind with orders. It is now working about 80 men and is turning out 125 tons of hydrate lime a day and about 70 tons of ground lime daily. During October the company had considerable trouble in getting cars. Its operations are now down to 20 feet. Its six new kilns which were started this fall are doing well and foundations are in now for four more kilns. The company cannot satisfy the demand for agricultural lime in season, and last fall was obliged to turn down orders for this stock.

BALTIMORE LIME NEWS.

Baltimore, Md., Nov. 19.—There has probably not been a big increase in the demand for any other kind of building material on the market in the past few years as there is for hydrated lime at the present time. Sales are increasing to such an extent that a local salesman declared to a representative of ROCK PRODUCTS that they were going up in leaps and bounds. "Hydrated lime," he says, "is fast taking the place of other lime, it only being a question of a little time before the entire trade will be using it altogether. The condition at this time is extremely healthy and the future is growing brighter each day."

A single blast of 4,600 pounds of dynamite was discharged at the quarry of the White Marble Lime Company at Marblehead, Mich. The drilling of the holes consumed a number of weeks. An immense quantity of rock was loosened.

The lime kilns at Swanton Junction, Vt., owned by the W. B. Fonda Company, were recently destroyed by fire. Everything about the plant excepting the buildings in the quarry was destroyed.

CHICAGO LIME NEWS.

Chicago, Nov. 21.—Unsatisfactory conditions have existed in the lime trade of this city for the past two months. Demand for lime has been sluggish and business dropped off a month ago for apparently no special reason and has been dull ever since. Prices are unstable and low, there being a noticeable absence of any uniformity, all sorts of prices being made. Manufacturers are not looking forward to much improvement in conditions this fall.

The Stearns Lime & Stone Company reports that business dropped off a month ago for apparently no special reason and business has been dull ever since. Prices are low and all sorts of quotations are made on lime, no kind of uniformity ruling. Conditions are decidedly unsatisfactory and volume of trade has been less than last year.

The Rockwell Lime Company reports demand for lime dropping off, which, perhaps, is only natural at the approach of the closing of the season. It has been operating its quarries and kilns up to the present time, but may shut down in the near future. Prices are low and unstable.

J. J. Pleas, vice-president of the Chicago Union Lime Works Company, stated the demand for lime was dull, the same as last month. Prices low and unsteady and conditions not as satisfactory as anticipated this fall.

At the Marblehead Lime Company it was stated that business had not been as good as last year and that it was dull this month because practically its season had closed. Prices lower than they should be to give manufacturers reasonable margin of profit.

ST. LOUIS LIME NEWS.

St. Louis, Nov. 18.—Secretary Healey, of the Glencoe Lime & Cement Company, states that there is a steady and fairly satisfactory demand for lime. As the building season is now on the wane, they do not look for a heavy demand. Prices are ruling steady and unchanged.

The Mill Creek Lime Company has been incorporated with \$20,000 capital stock at Nashville, Tenn. Incorporators: E. B. Stevenson, W. B. Greenleaf, J. W. Blair and others.

Warner Moore, of Richmond, Va., heavily interested in the flooring mill industry of Virginia and president of the Powhatan Lime Company, of Strassburg, Va., spent a couple of days in Chicago last week.

James Wiggins, of Oklahoma City, Okla., will establish a lime kiln at Ravia, Okla.

RUNNING TO CAPACITY AT GRAND RAPIDS.

Secretary H. O. Joseph, of the Grande Brick Company of Grand Rapids, Mich., states: "We started our factory early in January and made up to October 31st over 6,350,000 brick, on one press, ten hours a day, and shipped during that time over 5,900,000. We still have orders on the books for about a million bricks to be shipped this year. We are well pleased with this season's results, and will probably put in additional machinery if the orders keep coming."

FILLING MANY LARGE ORDERS.

The Belt Line Brick Company, manufacturers of sand-lime brick, Minneapolis, Minn., have enjoyed a very good year. At present they are furnishing brick for the following constructions:

1,250,000 for the Empress Theatre, in St. Paul.
1,000,000 for the Deere & Weber warehouse, at Minneapolis.
500,000 being shipped to the Cuyuna Range.
600,000 for the Puffer-Hubbard factory, Minneapolis.
300,000 for the new Odd Fellows Hall, Minneapolis.
200,000 for a new flat building.

The Montana Granite Brick Company, manufacturers of pressed face brick and dealers in builders' materials and supplies, at Helena, Mont., publish a system of three folders on sand-lime brick, describing the processes of compression, tests for absorption, and the uniformity in size of their product. This is among the best advertising matter that has come our way lately.

The Manitoba Pressed Brick Company, Ltd., manufacturers of sand-lime brick, Winnipeg, Canada, report they have made 6,000,000 brick on one press since March 1st. They have had a heavy demand for brick, and say they could have sold twice as many if they could have made them.



SEVENTH ANNUAL.

Official announcement has just gone forth to the members of the American Association of Manufacturers of Sand-Lime Products calling the seventh annual convention to meet at Detroit, Mich., on December 6 and 7. The convention will be held at the Hotel Wayne and special rates to delegates, European plan, have been arranged as follows: \$1.50, \$2.00 and \$3.00 (with bath); service a la carte. Reservations can be made direct or through the secretary as early as possible.

The program has been arranged with a view to having open discussion of practical topics from the testimony of experience of the brick makers. These features of past meetings have proved most valuable to the members. The proceedings are taken in full in shorthand reports and will be printed for private distribution to the membership. In the programme all of the suggestions of the members of the association have been provided for with the best available talent. Results of the coming convention are designed to be for each delegate to get his own share of the best information, technical, mechanical and commercial, that can be had.

Outline of the program follows:

PROGRAM.

OPENING SESSION, DECEMBER 6, 10 A. M.

Enrollment of attendance, payment of dues and issuing of badges.
Convention called to order by President S. O. Goho.
President's annual address.
Secretary's report—Frederick K. Irvine.
Treasurer's report—W. E. Plummer, Jr.
Appointment of committees:
Auditing.
Ways and Means.
Nominating.
Resolutions.
Question Box invitation by the president.
Adjourn for luncheon.

AFTERNOON SESSION, DECEMBER 6, 2 P. M.

Manufacturing and selling conditions compared from the local standpoint. Subject opened by Walter Godart, and calling on the members present for their comparisons.

Round Table conducted by H. B. Skeele.
Adjourn for the annual dinner.

MORNING SESSION, DECEMBER 7, 9:30 A. M.

What is the Most Satisfactory Method of Storing, Shipping and Delivering Brick. Subject opened by E. M. Loewenthal, and calling upon others for their experiences.

Round Table conducted by L. W. Penfield.
Improvements and Developments of the Industry.
Hydration of Lime for Brick Making, by W. E. Plummer, Jr., and H. G. Field. Discussed from experience.
The president opens the Question Box.
Adjourn for luncheon.

AFTERNOON SESSION, DECEMBER 7, 2 P. M.

Report of committees:
Auditing.
Ways and Means.
Nominating.
Resolutions.
Other committees.
Election of officers:
President.
Vice-president.
Secretary.
Treasurer.
Executive committee.
Inspection of sample brick on exhibition, comparison and discussion of possible improvements.

All manufacturers of sand-lime products are eligible to membership in the association, provided the goods they produce come up to association standards, upon application and subscription to the constitution and by-laws of the organization.

A hearty invitation is extended to all to attend the Detroit convention, to become identified with the progressive movement of this great industry.

Reports from each section of the country indicate that the good practical work of the American Association is bearing fruit in the shape of larger volume of business, more profits, and greater popularity of the product in important markets. In fact, it is plain that association members are the most successful manufacturers of sand-lime brick.

Association members who attend the Detroit convention are requested to bring two average run brick and one pint of sand for exhibition and comparison purposes.

Remember the date, December 6 and 7, at the Hotel Wayne, Detroit, Mich.

A sand-lime brick plant at Pasadena, Cal., has been purchased by J. Furlow, Luverne, Minn.

WRIGHT BROTHERS' NEW AEROPLANE FACTORY AT DAYTON, OHIO.

The first unit in the construction of the big new aeroplane factories, being built for the Wright Bros. Company at Dayton, Ohio, is shown in the accompanying photograph. The rest of the building, as is the one shown here, will be built of sand-lime brick, furnished by the Crume Brick Company of Dayton. These factories mark a new use for such constructions, being the first of any practical size, erected especially for the manufacture of aeroplanes.

"We have furnished the brick for some good buildings this year," said W. H. Crume, president and general manager of the company, "and have had the cream of the business, although building, except cheap residence construction, has not been brisk during the past season. We are 'up in the air' now furnishing the brick for these new factories."



THE WRIGHT BROS. AEROPLANE FACTORY, DAYTON, OHIO, BUILT OF SAND-LIME-BRICK.

Among the buildings furnished with sand-lime brick by the Crume company this year are Morgan & Wright Rubber Company at Detroit, Mich.; the Moline Plow Company's storage warehouse at Moline; the power plant of the Saginaw Valley Traction Company at Saginaw, Mich., and the Borden Condensed Milk Company's factory at Huntley, Ill. These are only a few of the buildings constructed of sand-lime brick furnished by the Crume company.

NEW SAND-LIME PLANT IN OKLAHOMA CITY.

The Oklahoma Granite Brick Company of Oklahoma City, Okla., is about ready to begin operations. R. L. Corley, secretary and manager of the company, states that prospects for business in the near future are very good. This company was formerly the Janesville (Wis.) Granite Brick Company, and was reorganized and moved to Oklahoma and remodeled. It will be in operation before the end of this month.

AUTOMATIC TAMPING OUTFIT INSTALLED.

The International Sand, Lime, Brick & Machinery Company has installed a new automatic tamper at its factory in Washington, D. C. The company will also install these tampers in all the new factories it is erecting.



GOLDEN GATE SAND LIME BRICK COMPANY, ANTIOCH, CAL.

The Philadelphia Sand-Lime Brick Company has been incorporated at Camden, N. Y., to manufacture sand-lime brick. Capital stock \$100,000.00. Incorporators, F. R. Hansell, John A. MacPeak and I. C. Clow.

Austin, Tex., will have a new sand-lime brick plant if the Indiana Sand-Lime Brick Company, formerly located at North Judson, Ind., fulfill their intention of establishing a plant there.



CONVENTION OF OPERATIVE PLASTERERS.

The Operative Plasterers' International Association has 17,000 members. "The value of plaster as a fireproof material in the construction of building is becoming more and more recognized," said William Exworthy, "and the trade is now coming into its own. We are taking our place with the other building trades as skilled mechanics and the condition has resulted in aiding our advance." Among the steps taken by the recent convention was the increasing of the death benefit from \$50 to \$200.

WILL OPPOSE ADVANCE IN PLASTER RATE.

Representatives of cement plaster manufacturers from several states met in Kansas City recently to discuss plans for combating the contemplated advance in freight rates on plaster. The matter now is before the Interstate Commerce Commission and the manufacturers are preparing to carry on the opposition should their present plans fail.

OLD RELIABLE WALL PLASTER.

The Kellam & Shafer Company has just opened their new modern plaster plant at Schenectady, N. Y. The average output of the plant is 600 bags a day, although the capacity is such that this output can be enlarged when necessary. All the work except two operations is done by machinery, six electric motors supplying the power for the operation of the mill. One of their new mixers is so arranged that when the plaster is mixed five bags can be filled at once.

LOOKING FOR LOCATION.

Alton, Ill., Nov. 21.—E. F. Kellie, president of the United States Kellastone Company, with headquarters at Terre Haute, Ind., has been here with a view to locating a plant here.

CONGRATULATIONS.

Princeton, Ill., Nov. 21.—Richmond De Armond Harrison, Jr., of Gypsum, Ohio, and Miss Gladys Olive Fisher, of this city, were recently married at the home of the bride's parents in this city. The groom is at the head of the agricultural department of the United States Gypsum Company.

Joseph Julien Collins, formerly of Chicago, now manager for the United States Gypsum Company in Peoria, Ill., and Miss Helen Catherine Kay, also of Peoria, were married there recently.

GYPSUM COMPANY'S MILL IN OPERATION.

F. A. Jones, consulting engineer, with offices at Youngstown, Ohio, states that on his recent trip to Winnipeg, Canada, he spent three months there installing the rotary calcining system to supercede the kettle system in the Manitoba Gypsum Company's mill, and putting the mill in successful operation.

"This gives them a very complete mill," said Mr. Jones, "with the kettle and rotary systems of calcining, and they have a capacity of 300 tons per day with either system. I am now engaged in getting out plans for some large extensions and additions to their mill, which will be built this winter. I am also preparing plans for a large mill in the West and my office is crowded with considerable work on local engineering, so that we have plenty to do for next spring."

FINE PLASTER JOB.

Minneapolis, Minn., Nov. 21.—Considerable plaster work is called for in the plans of the Interlachen Country Club which will be erected by members from the Twin Cities, now in the hands of Architect Cecil Bayless Chapman. The first story exterior walls are to be treated with a delicate yellow shaded rough-cast plaster, the second story exterior calling for some rough-cast plaster and the ceiling and interior walls using tinted materials very largely.

PLASTER COMPANY CHANGES.

Toledo, O., Nov. 20.—The Fishback Gypsum Company, of this city, has taken over the Fishback Plaster Company and are building a new gypsum mill near Gypsum, Ohio, the same being of concrete and steel construction and modern in every respect.

LOUISVILLE PLASTER NEWS.

Louisville, Ky., Nov. 17.—Wall plaster concerns in Louisville are about the busiest people in town, as the progress of building has reached a stage which demands wall plaster in increasing quantities. Some sizeable contracts have been let recently, and all the local plants are running steadily. Some plans have been made for big improvements which are to be made during the coming months, but they are not yet in sufficiently tangible shape to discuss in detail.

The Kentucky Wall Plaster Company has added an improvement of considerable value in the erection of a shed where its supply of sand is to be kept hereafter. The protection of the sand from the weather means much to the wall plaster man, for it will eliminate the cost of drying it out, which sometimes becomes necessary where no such protection is afforded. The new shed will hold about a month's supply. It is located immediately adjoining the yards of the Ohio River Sand Company, and arrangements were made for dumping the sand into the space reserved for it by using cars which run on elevated rails connecting the plaster company's plant with that of the sand men.

The Atlas Wall Plaster Company is doing a considerable business, some of its recent contracts including a 3,000-sack order from the German Protestant Orphan Asylum; a 4,000-sack order from the new apartment house of L. Keller & Son, and some big jobs which are being handled in the suburbs of the city. It handled the work of repairing the sand drying drum of the American Machine Company. J. W. Kneadler, a wall plaster man of Valley Station, Ky., was a recent visitor at the offices of the Atlas.

The Southern Wall Plaster Company got fifteen contracts within two days this month, and is consequently feeling chipper. A lot of residence work is being done in the Douglass Boulevard section of the city.

PITTSBURGH PLASTER NEWS.

Pittsburgh, Pa., Nov. 21.—The Colonial Wall Board & Plaster Company, whose plants are located at Ford City, Pa., and Venice, Ill., reports a very much stronger tone to business. Its October business was fully 30 per cent better than in 1909. It is now working about 50 men at its Ford City, Pa., plant. The eastern market and the middle west are taking more wood fibre plaster this fall than the Pittsburgh district, where building has been away below all the year. The company's officials look at 1911 prospects with much favor and are preparing for a big business after January 1st.

SAN FRANCISCO PLASTER NEWS.

San Francisco, Cal., Nov. 16.—The plastering contract for the new Knights of Pythias Hall has been let to G. Y. Burke, at \$5,900.

M. Lynden has taken a contract for interior and exterior plastering, and plaster ornaments, for a three-story residence for T. E. Bailly, at Jackson and Laurel streets.

J. F. Makowski has taken a \$12,250 contract for plastering in Dr. McNutt's new building on Pine street, near Jones.

BALTIMORE PLASTER NEWS.

Baltimore, Md., Nov. 19.—Hard wall plaster business is good. Some important work is now in progress in which that kind of plaster is an important feature, and more will be announced soon. Robert S. Green says the outlook for the winter is very encouraging, and that he has quite a few of the largest contracts on hand and expects more.

The Western Lime & Plaster Company, with a paid-up capital of \$350,000, has been organized by Portland capitalists to engage in extensive manufacture of lime and all kinds of hard and finishing plaster. The company has extensive deposits of lime rock near Huntington, Ore., and gypsum deposits covering 1,000 acres. Lime kilns are being erected and will start turning out the product in about thirty days. Plaster mills with a capacity of 400 tons per day are being planned.

The Utah Plaster Company of Richfield, Utah, has been incorporated to engage in the manufacture of cement, plaster and other like products, capital stock \$500,000. The incorporators are Homer C. Bloom, of Pittsburgh; Jacob W. Young, J. M. Buckle, M. F. Murray, Clare Pancoast and E. E. Hoffman, all of Utah.

WILLIAMS GRINDING MACHINERY.

Especially Adapted to the Manufacture of Cement—
Many Are in Successful Use.

The accompanying cut illustrates the new Williams Universal Grinder, which is used very extensively in cement plants and in commercial limestone plants for producing fine ground limestone for various purposes.

In the cement plant this machine is known as a preliminary grinder and will take any dry raw material, such as limestone, shale, clay or coal and reduce the same at one operation from cubes not exceeding 2 inches to a product 95 per cent of which will pass through a 20 mesh sieve without screens or outside separators.

This is a machine that gives a fine, uniform product for tube mill feed without screens or separators. The cement manufacturer will appreciate the value of this machine on this account.

This machine, used as a preliminary grinder in the raw end of a cement plant, delivers a tube mill feed product, without any separator whatever, outside of the machine itself.

These machines will give the product above referred to 95 per cent through 20 mesh, year in and year out, because the operator has the machine under his control at all times. Close inspection of the cut shown herewith will explain this feature.

The material enters the hopper of this Universal grinder through an automatic feeder, which automatically feeds the material to the grinding machine, preventing overfeeding of the machine at any one time. This feeder is adjustable, so that any given quantity may be fed into the machine, and this quantity can be changed from time to time.

The material then passes down into the grinding machine and is first broken or fractured on an anvil or breaker plate; the grinding is then done on the corrugated grinding plate, which extends down to the center of the machine below the shaft. This entire front end of the machine, holding both the breaker and the grinding plates, is adjustable in towards the revolving cylinder of loose hammers, by means of a hand wheel on the outside of the machine, this adjustment being made while the machine is in operation, keeping the point of contact between the ends of the hammers and the grinding plates the same at all times.

The material is then screened through the cage bars toward the back and top of the machine, which bars are milled on a milling machine, each and every opening being absolutely the same.

Between the grinding plate and the cage proper in the improved Williams machine there is a metal escape or trap which is so arranged that when a piece of iron passes into the machine, if it is a large piece, the plate breaks and allows the iron to pass through without damaging any part of the machine. There is a lever on the outside of the machine with a weight which drops when the plate is broken or dumps, this indicating to the operator that a piece of iron has passed through the machine and the plate is broken. It requires a very small space of time in which to replace another plate and these plates are made inexpensive and can be replaced at a cost of about \$1.80 each.

If this foreign material had no escape through the metal trap the damage to the machine might be anywhere from \$10 to \$100. This is the only machine of its kind having an attachment of this character.

The wear on the hammers and the grinding plate, as above mentioned, is taken care of by the adjustable front end, which reduces the cost of maintenance in a Williams Universal Grinder to the minimum. The hinged hammer principle, which was invented by Milton F. Williams, the president of this company, in 1895, we believe is too well known to require a detailed explanation; therefore, we are only touching upon the adjustable features of the Universal machine proper. There are several hundred of these Williams grinding machines in operation in cement plants throughout the country, preparing raw material for the tube mills, and so far as we know, they are all giving excellent satisfaction.

The latest addition to the Williams Universal grinding machines is the 9 special, 60-inch diameter machine. This machine will handle from 18 to 25 tons per hour of raw material, suitable for a tube mill feed.

In the plant of the Universal Portland Cement Company, Universal, Pa., there are six of these No. 9 machines in daily operation, preparing all of the limestone that is used in the manufacture of their cement at this plant for tube mills, and the limestone used at this plant is extremely hard, much harder than you will find in 95 per cent of the ce-

ment plants throughout the United States; yet the first machine that was installed in this plant over two years ago is still in continuous operation, giving the same satisfactory results today that it did the first week it was in operation.

The housings of these machines are thoroughly protected from wear and tear by heavy linings and chilled plates and, in fact, the body of the machine is good for a great many years to come; the only parts that are replaced or renewed are the hammers, the cages, the grinding plates, the metal extractor plates, occasional hammer bolts, and wearing plates, all of which are easily replaced and at small cost.

The hammers and grinding plates are so arranged that the maximum amount of wear is received from these parts by means of the adjustable front end. The cage is made of very hard, tough material and is sectionalized so that one bar or any number of bars may be replaced at any time. The linings are made in sections, interchangeable, and can be renewed at small cost in case one section of the liner shows more wear than another.

In addition to the six machines mentioned above, they have in operation in the Universal Portland Cement plant two of these large No. 9 machines at South Chicago, and two at Buffington, Ind.

In addition to this machine, they have a smaller size, No. 3, which is of the same construction as the No. 9, only its production is about one-half. This machine is used very extensively in the smaller cement plants, where a unit of from 600 to 800 barrels of raw material per 22 hours is desired, and they have perhaps 100 of these machines in operation.

The results as to maintenance, wear and tear, horsepower, etc., are the same on this size as on the No. 9. A great many operators do not wish large units in their plant, as they argue that when one unit is down, if it is of a large denomination, a great percentage of the plant is put out of commission while replacing parts or repairing the machine. This is a good argument, and for



these people we have this smaller unit, of from 600 to 800 barrels per 22 hours.

The Williams Patent Crusher & Pulverizer Company are furnishing to a great many of the western cement plants and central state plants their Vulcanite grinders, which have been used for years. These machines are of the same hammer type, the construction being very similar to the Universal, excepting that they do not have the adjustable front end.

These Vulcanite grinders will take raw material, limestone, shale, clay or coal, in cubes of 3 inches and under, and reduce the same to 1/2 inch or 3/4 inch. This makes an excellent feed for those plants which use roller mills as finishers in the raw end.

The term, roller mill, applies to such machines as the Sturtevant Ring Roll, Kent, Fuller-Lehigh, Emerick Ball Pulverizers, Griffin mill, Raymond roller mill and Bonnot mill. Any of the roller mills that are used as finishers in the raw end of a cement plant will deliver a much better product if the material is ground or crushed before passing into these machines, but a great many manufacturers of these roller mills claim that they can take 1 1/2-inch stone and reduce it, either to a finished product, or a 20 mesh product in one operation without recrushing, but they claim that a cement manufacturer can reduce his horse power, can increase his production, and can receive a more uniform product if he crushes or recrushes the material to 1/2 inch or 3/4 inch, before passing into the roller mill.

They claim to have proven these claims beyond any question of doubt by installing these Vulcanite mills in plants where every one of the above mentioned machines are in operation, and that the results are much better in points of low horse power and increased production where a recrushing takes

place between the gyratory and the preliminary or finishing grinder.

They cite the cement manufacturers to hundreds of these Vulcanite mills in daily operation.

They also manufacture a large, heavy type of crusher, known as the camel back, which is especially adapted to taking the softer grades of limestone, such as are found in Kansas and Texas, resembling the chalky stone which, on account of its peculiar nature, must be very coarsely crushed in the gyratories, sometimes as coarse as 5 inches or 6 inches. These large camel back crushers will take this soft stone in any size cube under 6 inches and reduce the same to 1 1/2 inches or 1 inch or 3/4 inch. They have perhaps six or seven of these large machines in Kansas and Texas, and some of them are producing as high as 75 to 100 tons of this material per hour.

This company also manufactures one of the best coal crushers on the market today. These machines will take run of mine coal and reduce the same to any size a cement manufacturer may desire, from 2 inches down to dust. These machines can be used where a cement manufacturer has run of mine or lump coal, and cannot get slack. This machine will make an excellent product for the dryer, or this crusher can be used in plants where the Aero pulverizer is used and where the coal is not dried. In this capacity the machine takes run of mine coal and reduces it to 1/2 inch and finer, which is an excellent feed for the Aero pulverizer, or for any of the roller mills that are used in cement plants. They have perhaps 75 of these machines in operation in cement plants, as well as 500 or more in coking operations throughout the United States.

They also manufacture a number of special machines for cement manufacturers who have difficult work to perform in the way of grinding shale or clay. They have machines that will handle wet material before passing to a dryer, also machines that will grind dry clay or shale after coming from the dryer. They can prepare this clay or shale either for the tube mill or for the roller mill. In a great many plants where the clay, shale and limestone is not mixed and ground in the Williams machines, they quite often supply separate clay and shale grinders in addition to those for the limestone.

They desire to make it known to the cement trade that they manufacture nothing but crushing and grinding machinery, and do not attempt to handle anything but raw material, and believe that they have a line of machines that are of interest to every manufacturer of cement in the United States and Canada, as well as foreign countries.

These limestone grinding machines, both Universal and Vulcanite type, are extensively used in commercial limestone plants for producing various grades of limestone as used by glass houses, steel foundries, and various other industries.

The Williams people have a number of bulletins describing these machines for the various purposes and anyone interested will receive the necessary literature by addressing a communication to the Williams Patent Crusher & Pulverizer Company, Sales Department, Old Colony Building, Chicago, or at the factory, 2705 North Broadway, St. Louis, Mo.

ELEVENTH ANNUAL GOOD ROADS CONVENTION.

(Continued from page 40.)

organizations. The farmer has never been accused of thinking of his own interests too far ahead. On the contrary, he is too apt to lag behind and let others take advantage of him. But he is beginning to understand and heed the advice of progressive farmers, who are realizing that the only protection for the farmer is perfect organization. The manufacturers greatly increase their profits and protect their business by good organizations which they loyally support. Farmers are beginning to see that what is good for the manufacturers is good for them. The farmers are the last of the great interests of the country to undertake the organization of their industry. They already have several thousand selling organizations in the country. They are realizing that combinations of their commercial strength and co-operation are as profitable to the man who produces and sells farm products as to the man who forms a trust, to the working man who gets up his union, or to the merchant who has his agreement. They are all one and the same so far as working for the interests of the members is concerned. The manufacturer strives to get the best possible prices for his products. It is to the advantage of the farmer to do the same.

Every day shows progress in different districts of different states in the way of organizations looking to better markets and to controlling the prices on different farm products. These agricultural organizations will eventually lead, as they have in other commodities through commercial and manufacturing organizations, to better understanding and closer combination of interests in all products that are raised by the farmer and sold on the market. But they will remain separate organizations, dealing with the different agricultural commodities, except so far as they can act in concert for the good of the whole, which, in many instances, can be done through joint agencies established for the purpose of selling their respective products.

Your officers and your agricultural publications will tell you much better than I can of the progress these farm organizations are making. The Hood River valley apple

Interests are organized and sell their crop in bulk to their advantage. There is no reason why the Ozark mountain apple growers should not do the same. The Southwestern Truck Growers' Association has an organization for the marketing and division of profits of their output, and the returns are so much better that they could not be induced to go back to the individual way of doing business. The orange growers of the Pacific coast are also handling their business through an organized system. The cotton planters of Texas have their organizations in various stages of completion, but it is certain that in a few years the advantage of using co-operative selling agencies will become convincing to all planters. The grain men will have their own elevators, the cotton planters will use their own warehouses, the fruit raisers their own shipping facilities, the potato growers their own marketing agencies through their various combinations of interests. And in the establishment of these business methods and systems you will have the assistance and the co-operation of the railroads of the country. They are interested in your welfare and may be depended upon to aid in working out your economies. It is good business to do so.

In other words, you are just beginning to adopt trust methods in order to work out the economies of your own business. You are, therefore, vitally interested in the control which the National Government proposes to exercise over your business agencies. You will be affected to a greater extent than any other industry. Legislation proposed for the control and regulation of the products of the factory applies just as well to the products of the soil. Such legislation will regulate the marketing of potatoes handled through agricultural organizations just the same as it will the marketing of pig iron.

The farmers in the past have been disposed to bitterly antagonize powerful trade organizations which control, or nearly control, the different products of our commerce. Now the farmers themselves are properly building up large trade organizations which they may call co-operative associations, pools or selling agencies, but under whatever name they are operated they have the same object in view as other commercial alliances. Regulations established for the control of the business of other organizations cannot be different from those which control agricultural interests. The law which would fix prices for articles dealt in by a trust, a pool or a commercial organization of any kind would give authorities the right to fix the price at which farm products could be marketed under an organized association or individual agreements. When the farmers are working under business organizations you will find that through those organizations you can solve most of the problems for which legislation is now being agitated.

Every Federal and State officer should study the development conditions and the requirements necessary for upbuilding the country in a manner fair to all interests and institutions; and every effort should be made to avoid hampering and distressing these vast industrial interests which mean so much in the daily lives of our citizens.

The rapid growth of our commerce between the states, both from the factory and the farm, and the gigantic strides made in our railroad development within the past twenty years have brought up for our consideration and settlement certain new political questions. The Federal Government, originally organized as a great political sovereignty, with power to declare war, conclude peace, and gather revenue from taxation, has been compelled to take up a much more momentous problem, and that is, what jurisdiction shall it have over the commercial business of the country?

The states were originally designed to deal with economic questions, because at the time of their organization commerce was almost wholly within the states. The commerce between states then crept slowly over rough wagon roads; now it moves swiftly over lines of railroad which would reach almost ten times around the world. As this commerce between the states expanded, and as the transportation was extended, the strictly state questions were pushed over the boundaries of single states into others, until from state to state and territory to territory, a far-reaching, connected and interdependent industrial development was created. This industrial movement must be subjected to some sort of authority and be made to obey some system of law. There is no occasion for treating this development as in any sense lawless, nor is there any reason for attempting to arrest it because it requires a readjustment of Federal and state jurisdiction. For after all, this thing called interstate commerce and these instrumentalities called railroads represent the very vitals of our national progress and the very health and wealth of our whole people, and the people of the country, instead of being aroused by inflammatory appeals to adopt measures to destroy them, should be taught by enlightened discussion to find some way to promote them and at the same time fairly regulate them.

The states and the people, under the resistless force of this development, uniting the states and the people of the states in one bond of mutual interest, have been welded into an industrial whole, and a crusade against one class is a crusade against all classes. This is the New Industrialism, which has been mistaken by some as predatory wealth, by others as revolutionary plutocracy, and still by others as a cause for "New Nationalism." That it must be subject to law and be obedient to government, no rational man will dispute; but that it should be made the sport of politics, the theme of demagogues, or the plaything of socialists, every good citizen fervently hopes to prevent. If, in order to properly regulate the growth of New Industrialism, it is necessary for the Federal Government to have more power than was originally granted, let that proposal of new power be drawn up and submitted in a constitutional method to the states for adoption, and let the power of government, in keeping pace with the commerce of the soil, the merchant and the factory, increase in as orderly a manner as the agricultural and industrial development. This New Industrialism must, and will, conform itself to the new laws of the country, but it protests that these new laws should not proceed from the hot zeal of overwrought political economists. If in the course of time this New Industrialism, on account of its widespread and far-reaching growth, should find itself under Federal control, let it be so; but let that Federal control be extended in such an orderly way and by such constitutional methods as will, on the one hand, insure the stability of our government, as well as, on the other hand, promote the progress of our country.

Granitoid blocked pavement has been laid on a 315-foot block on Zeigler street, Boston, under a five-year maintenance guaranty.

Side Talk

YOU WANT THIS.

The Northwestern Steel & Iron Works, Eau Claire, Wis., announce that their 1911 catalog of concrete machinery will be the most magnificent publication of its kind ever issued. It will describe the entire line of "Northwestern" concrete machinery, molds and tools. It will contain hundreds of beautiful half-tone engravings, taken from actual photographs. It describes everything in the concrete machinery line and constitutes a valuable encyclopedia and reference book.

A WONDERFUL EXAMPLE OF CONCRETE WATERPROOFING.

A feature of the Brussels Exposition, which is attracting thousands of visitors, is a complete house built on the edge of one of the many lakes which adorn the exposition grounds.

Five feet of the house is under the water, and through an orifice at the top 60,000 liters of water hourly pour over the outer surface. Yet, although the house has been subject to the action of the water for months, not the slightest sign of leakage appears anywhere on it.

The concrete is about four inches thick, and the



REMARKABLE EXHIBITION OF WATERPROOFING AT THE BRUSSELS EXPOSITION.

waterproofing substance—Ceresit—is not even mixed with it. It has been applied in the form of a coating on the outside. This coating is a little over three-fifths of an inch thick on the part above the water and about an inch thick on the part under the water.

The fact that under these conditions the pavilion has remained for months absolutely waterproof has aroused wondering comment among hundreds of thousands of visitors.

This exhibit was awarded the Grand Prix for concrete waterproofing compounds.

CONCRETE WEATHER BUREAU.

The Chicago Portland Cement Company, 108 LaSalle street, Chicago, has prepared for distribution an attractive advertising card, with the heading "Concrete Weather Bulletin." The substance of the reading matter, properly set off by the printer's art, is: "Don't let the weather deceive you—the days are warm, but the nights and mornings are cold. Cold weather is not conducive to quick setting, and long-time sets mean slow hardening, thus reducing the strength of the concrete for a considerable period. Mr. Contractor, as a precaution, watch the weather—give your work ample protection, and—most important of all—heat the material and the water. This will insure satisfactory work." This is supplemented by a tag bearing the same inscription, one of which is attached to every other sack of cement shipped from their mills at Oglesby, Ill.

MOTOR DRIVEN AIR COMPRESSORS.

The Allis-Chalmers Company, Milwaukee, Wis., has just issued Bulletin 4025, briefly describing the Allis-Chalmers motor driven air compressors and calling attention to a few of the many applications to which this type of apparatus is adapted.

Besides its line of large engine and motor driven compressors, Allis-Chalmers Company has placed on the market smaller motor driven compressors built in sizes from 11 to 50 cubic feet of free air per minute; AA1-11 cu. ft.; AA6-16 cu. ft.; B2-20 cu. ft.; B4-25 cu. ft.; C5-35 cu. ft., and D4-50 cu. ft.

Allis-Chalmers motor driven air compressors, which are built in the most compact form possible, have two cylinders, each provided with a single acting plunger piston, operated by a connecting rod from a drop forged steel crank shaft.

Allis-Chalmers motor driven air compressors can be supplied either for stationary work or as a portable outfit. In the latter case the unit is mounted on a truck, together with storage tanks and governor. The portable outfit can be operated by connecting to the nearest receptacle by means of flexible cable.

Allis-Chalmers motor driven air compressors are so designed that they require absolutely no attention. The oiling system is entirely automatic and positive and by filling the oil reservoirs about once a month constant lubrication is insured.

The use of an automatic governing device, whereby the air pressure is maintained practically constant at all times and by which the motor is automatically started or stopped as often as may be necessary, is a decided advance over older methods. Its use eliminates all necessity for any hand manipulation of switches and allows the compressor to be set in remote or comparatively inaccessible places. The automatic governor can be set to maintain practically any desired pressure. It will, of course, maintain the highest pressure desired, but lower pressures can be obtained by the use of reducing valves.

FREE SAMPLE OF AMATITE.

There are doubtless many readers of this paper who are users of ready roofing, who are not familiar with Amatite.

This is a new type of roofing which came upon the market a few years ago and has found wide favor on account of its mineral surface which needs no painting. This mineral surface is embedded in pitch, which grips the stone firmly and makes a kind of pitch-concrete surface. This surface is abundantly able to withstand all sorts of weather year after year without any painting.

Its price is no higher than that of the old-fashioned painted kinds. In fact, in many cases it will be found to cost considerably less.

Next time you paint your roofs remember that painted roofings are no longer the only kind you can buy.

In the meantime it is a good idea to look up Amatite. You can get full information and a free sample from the manufacturers on request. Address Barrett Manufacturing Company, New York, Chicago, Philadelphia, Boston, Cleveland, Pittsburgh, Cincinnati, Minneapolis, St. Louis, Kansas City, New Orleans, and London, England.

STATIONARY AND PORTABLE LIMESTONE CRUSHER.

The Williams Patent Crusher & Pulverizer Company, with general sales offices at 545 Old Colony Building, Chicago, has recently made a new departure in the construction of machinery for the preparing of limestone for land fertilizer. It has installed no less than fifteen plants in the last year for this purpose. The agricultural colleges throughout the United States are educating the farmer to the fact that limestone when properly pulverized can be used as a fertilizer at a low cost.

This has opened a new field for the quarries that have been throwing away their screenings. A great many quarries in the vicinity of steel mills who make nothing but a fluxing stone are compelled to pay the railroads good money to haul this stone away and dump it. This same limestone in the form of screenings can be properly pulverized at a small cost and sold to the farmer at a very good margin to the quarry operator.

The illustrations in their advertisement on page 63 show two of these grinders, one of them a portable, which are already in great demand.

In their advertising matter describing these machines and the field for crushed limestone they publish the following:

The grinding of limestone for agricultural purposes to be sown upon certain lands is fast becoming the popular way of fertilizing in limestone localities, and neutralizing the acid in the land which has been sour, as is commonly termed.

Illinois having possibly been the first state to take up this proposition, quite a number of other states and state agricultural colleges in limestone districts having been experimenting along this same line, and all of one accord have come to the conclusion that if raw limestone, high in carbonate of lime, is very beneficial when pulverized, and used or sown in wheat drills, when sowing wheat, or other crops, or it can also be sown broadcast upon the ground and made quite beneficial when so used.

We herewith describe our system of small stationary plants by cut No. 327, which describes, first, a crusher which discharges the macadam size limestone into an elevator which elevates same into a pulverizer, and from said pulverizer is re-elevated either into a bin or wagon, as the case may be, to suit requirements.

We also show in cut No. 324 a portable plant mounted upon trucks which can be operated with a thrashing engine of from 15 to 20 horsepower, and hauled from place to place to suit portable requirements, while we have in southern Illinois a large stationary plant turning out fifty tons an hour of limestone dust.

Placing burned lime upon the land is a very old process, and was considered by our forefathers to be beneficial, which no doubt it was, but in the burning of lime and reducing it to the condition of flour causes it to soon evaporate and lose its strength giving qualities to the land. Whereas when pulverized to wheat size and finer it is considered to give off its beneficial qualities more slowly, being allowed to dissolve in the land by nature, causes it to last much longer and is much more beneficial.

The Tennessee Agricultural Experimental Station finds that no large area in the state is well supplied with this important element.

In fact, the so-called "limestone soils" seldom contain one-half pound of lime in 100 pounds of soil. One-fifth of a pound per hundred would be a fair average, much more should be present.

The trouble is that this important element has been leached away by heavy rains as well as by constant cropping so that it is badly needed. Numerous field experiments on Tennessee soils have shown that lime is a necessity to get satisfactory crops of clovers and grasses and that the yields of both wheat and corn may be profitably increased by its use. Many soils are sour, lime corrects this difficulty, sweetening the soil and putting new life into it so that crops such as alfalfa and clovers can be raised that are impossible otherwise.

Lime is being recommended for most of the eastern and southern states. In fact, the most progressive farmers are either applying now or planning to do so. The German farmers of Chester and Lancaster counties, Pennsylvania, where are the best and most valuable farm lands and the best farming in America, have made this a practice for generations.

What kind of lime shall be used? The answer to this question is whatever is cheapest, also ease of application should be considered.

Ground limestone of about the texture of coarse corn meal at \$1.25 per ton is undoubtedly preferable to the burnt lime at the usual price. A fair amount is two tons per acre, an application lasts several years, probably once in six years is ample. It may be applied for any crop, but the light rains in the fall of the year makes that a favorable season.

An important reason for the failure of farmers to lime their land in the past has been the extremely disagreeable job of applying the burnt lime. The fact that ground limestone rock would answer every purpose has not been recognized until recently. It is now receiving the favorable verdict of both state and United States authorities and with the aid of a good distributor may be put on the land in a most satisfactory manner.

HEATH & MILLIGAN CEMENT COATINGS.

One of the "live wires" in the trade is F. J. Morse, who is making great strides in his new field as the head of F. J. Morse & Co., 1311 Chamber of Commerce Building, Chicago. Mr. Morse is well known in all construction circles, having been connected for years with the Sandusky Portland Cement Company, and has a large circle of friends.

For a number of years he has been making a specialty of waterproofing and decorating of cement, stucco, brick and stone surfaces, and in order to properly care for the fast growing demand for cement coatings and cement coating work with fresh factory made goods rather than material which has been warehoused for some time, so as to assure the best of results on all work, he has arranged to co-operate with Heath & Milligan Mfg. Co., Chicago.

Heath & Milligan Cement Coatings are the result of years of experiment and practical tests, and after investigating and testing them thoroughly Mr. Morse believes that they meet the most rigorous requirements in the best possible manner, and he is now in a position to promote and explain this very essential class of work with a product that he is sure will give absolute results.

In connection with Heath & Milligan, Mr. Morse will retain his present address at 207 Chamber of Commerce Building, Chicago, as a specialty office in this particular class of work, and hopes to co-operate not only with architects and owners in building work here, but also with the dealers handling this class of material.

In an interview relating to his product, Mr. Morse says:

The cement coating that we are distributors for, and operate with, is manufactured from a pure white Portland cement, and has been made specially for application to cement, stucco, stone and brick surfaces. From the white, any color can be had. It is applied with a brush, as a paint. It penetrates and forms an absolute bond with the work to which it is applied, making such work all of a uniform color and impervious to water, prevents discoloration, efflorescence, lime or salts from

appearing on the work, and is permanent. There are four special uses for it that should interest you:

First—For the application to all exterior reinforced concrete surfaces, where one coat is applied, will make it a uniform color and impervious to water. We cite for example the exterior of the Baltimore & Ohio and Lake Shore depot at Gary.

Second—For application to the interior of reinforced concrete buildings, where it has proven unsuccessful to apply a lime plaster to the walls, ceilings and columns, we apply our cement coating directly onto the cement



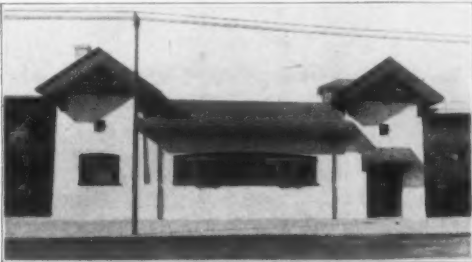
F. J. MORSE.

surface, giving a permanent and uniform color, and at less expense than the plaster would be, and far more acceptable.

Third—is the application for light effects to either exterior or interior brick surfaces, where one coat of white cement coating will give an absolute white cement surface, making such surface impervious to moisture and discoloration, not only making the bricks themselves waterproof, and white, but also the mortar joint as well.

Fourth—For application to stucco surfaces exposed to the atmosphere, such surfaces soon check, crack and become discolored. Our material, applied in one coat to such surfaces, also makes one uniform color, for buildings that have the black damp effect, that are shown on these buildings after coming in contact with rains and atmospheric conditions.

One coat of our cement coating has a covering capacity better than three coats of any white lead or oil paints could do, and the advantage of work over that of white lead or oil paints is that paints are only films, which are attacked severely by the alkali contained in the cement surface, which quickly destroys the life of the paint and it very soon peels and comes off, while our material, as I stated before, penetrates and forms an absolute bond with the work to which it is applied.



WILSON AVE. STATION OF NORTHWESTERN ELEVATED RAILROAD, CHICAGO.

In the illustration of certain points showing the value of artistic coloring the company includes the following argument in its advertising matter:

"Cement, stucco, and concrete have demonstrated their superiority to all other building materials in respect to strength, convenience, durability and cheapness. It has been found wanting in only one quality, that of beauty. There is a vast amount of ornamental architectural work being produced in the country, nearly all of which is of an artistic character as far as design and surface are concerned, but all having that one great drawback, an uninviting color.

cheapness. It has been found wanting in only one quality, that of beauty. There is a vast amount of ornamental architectural work being

"The monotonous blue-gray of ordinary Portland cement offers a dreary contrast when compared with the beautiful clear white of marble, the red and yellow of terra-cotta, or the warm gray of granite.

"This defect, as well as its tendency to absorb moisture, has been a source of great inconvenience to both architect and owner.

FREIGHT CLAIMS.

(Continued from page 30.)

strong and durable, made of rope manilla paper or linen and should be securely sewed to the package or tied to it by a wire tie.

(b) Name of consignee and destination in full. Where there are two points in a state of the same name, then the county should be designated.

(c) Wherever practicable shipper's name and location, with the word "from" preceding them, should be given. If this is done, disposition of shipments which may go astray can be more readily accomplished.

BILLS OF LADING AND SHIPPING RECEIPTS. Bill of lading or shipping receipt should be made in a clear and legible manner, containing the following information in full.

(a) Name of shipping point and date of shipment.

(b) Name of consignor.

(c) Name of consignee and destination. Where there are two points in a state of the same name, then the county shall be designated.

Names of states should be written out plainly and not abbreviated. For example, the abbreviation of "Ark." and "Ariz." for Arkansas and Arizona are quite likely to lead to errors in forwarding, which can be avoided by giving the names in full.

(d) When the freight is consigned to a place not located on the line of a railroad, each package, bundle or piece shall be marked with the name of the station at which consignee will accept delivery, and such other information given as required by the rules of the carriers.

(e) Number of packages and description of commodity.

(f) Less-than-carload freight shall be properly marked and special marks, if any, shown in shipping order or receipt.

(g) It is of the utmost importance that shippers in the preparation of their bills of lading or shipping tickets should properly describe the articles to be embraced in the shipping ticket or bill of lading in conformity with the description given in the classification, not only as to the character thereof, but the style of package, whether in boxes, crates or bundles, as the rating is usually predicated upon the character of the package. We urge upon you and your shipping clerks the need of making legible bills of lading or shipping tickets descriptive of the articles to be shipped and the character of the package, avoiding the use of abbreviations as much as possible, and where abbreviations are used, it be clearly expressed. The use of trade names must be avoided.

NOTATION OF SHORTAGE AND DAMAGE ON FREIGHT BILLS.

(a) Shortages discovered at time of delivery should be endorsed on the paid freight bill.

(b) Damages discovered at time of delivery should be endorsed upon the paid freight bill, such notation to state the exact extent and nature of damage.

If the above suggestions are put into effect by our members we are confident that the result will be favorable to both parties and lessen greatly the amount of friction.

Respectfully submitted,
FREIGHT CLAIMS COMMITTEE,
J. M. Belleville, Chairman.

Tracing of Freight.

In the report which we presented to the meeting of the league held in Chicago on July 12, we referred to the very grave abuse by shippers and receivers of freight in the matter of tracing of both carload and less than carload shipments, and we desire to once more call the attention of our members to this abuse, and to urge upon them in the most emphatic way the necessity for a reform in this very important matter. The evil seems to be growing and calls for active co-operation between shippers and railroads to bring about a better condition. To illustrate the abuse, we quote from a recent statement made by a car service officer of a western trunk line at a meeting of car service officers:

"On account of working a portion of our office force last night I remained at the office until 9:30, and before leaving looked over tracing requests received between 6:30 and 9:30 p. m., and found in the three hours we had received telegraphic tracers for 125 cars. In the morning I found we had received 223 more, making 348 wire tracers between 6:30 p. m. and 8 a. m., and added to these were as many more which came in by morning mail."

The conditions with regard to tracing of less carload shipments is equally bad, if not worse, and certainly calls very loudly for reform.

Carriers through their operating organizations have specific trains in which package freight is to be transported and are likewise organized for the handling of carload freight requiring expeditious movement, so that when shipments are offered to carrier, with a well organized system, it has its definite place and, no unforeseen accident happening to displace it, it will move in its regular way to final destination. The tracking of such freight will not hasten a shipment, but, to the contrary, by reason of the great number of tracers which are being employed, it acts as a barrier to the effectiveness of the legitimate tracer.

No tracer should be requested unless there is some definite and urgent reason for tracing the property. No tracer should be started until a complaint has been received from consignee of the non-arrival of the whole shipment or a part thereof, and then only after a reasonable time has elapsed for the consignment to reach destination, unless shipper has information that his goods are being delayed at some point in transit.

Your committee recommends to the various commercial organizations that they do all in their power to reduce tracing to a minimum, and where it develops that delays are occurring upon certain line or lines, efforts be directed toward securing more expeditious movement by improved service.

Respectfully submitted,
FREIGHT CLAIMS COMMITTEE,
J. M. Belleville, Chairman.

BLASTERS' FRIEND.

Those who use electric detonators in firing blasts will be interested in a new electrical testing instrument known as the "Blasters' Friend," recently devised by the New York Blasting Supply Company of New York.

Owing to the necessarily delicate construction of the platinum wire bridge in the shell of a detonator, it frequently happens that it becomes broken or disconnected, thus destroying the circuit and rendering the detonator worthless. In many cases misfires and premature explosions are caused by defective detonators. Heretofore, to detect the deficiencies of a detonator before using has been an impossibility, owing to the absence of a testing instrument adapted to the purpose.

The component parts of the new device consist of an extremely sensitive chloride of silver battery, to which are connected two separate solenoids, which are carefully tuned with the ignition wire in the detonator. The outside of the instruments contains two metal posts, which, when connected, produce a magnetic flux actuating a small piece of metal attached to a staff, to which is affixed the designating vane, or as it is termed, the "O. K." disc. The outside poles, when connected, cause the current to flow through the wires and platinum bridge of the detonator, energizing the solenoid which actuates the staff carrying the designating vane and causing the "O. K." disc to come to a common center. The face of the disc, upon which is stamped "O. K.," shows through a glass dial in the side of the instrument, thus designating that the circuit is complete. When the wires are withdrawn from the instrument the vane or disc disappears from view.

The operation of testing a detonator is extremely simple; place the end of each wire on the poles of the tester, and if the "O. K." disc appears it is perfect; if the disc fails to appear the detonator is defective. To test the entire blasting wire circuit after all holes are loaded, connected and leading wires attached, before connecting the blasting machine or electric current, place the end of each leading wire on the poles of the tester, and if the "O. K." disc appears the entire circuit is complete; if the disc fails to appear there is either a broken wire or poor connection requiring adjustment before the blast can be fired.

From the above description of the "Blasters' Friend," and the explanation of its use, its importance as a part of the equipment for blasting is apparent.

The instrument is mounted in a case, which is substantial, and covered with black leather; the dial-glass is surrounded and retained by a lacquered brass retaining ring, about the size of a watch crystal, locked from the inside. The instrument can be carried in the hip or side pocket without inconvenience, ready for instant use.

O'LAUGHLIN SCREENS.

In the O'Laughlin system of screening, manufactured by the Johnston & Chapman Company, 2906 Carroll avenue, Chicago, the screening cylinders are placed concentrically, one inside of another, furnishing a large screening area in a short length, so that all may be framed together rigidly, well-supported on a few ample bearings. So they keep in line and run with small expenditure of power. To further reduce friction and make easy running, these screens have a large conical thrust wheel on bronze bushing, for taking the end thrust. This wheel bears on a rim of the screen. If such a wheel were cylindrical, it would have some sliding friction, but as it is proportioned, and with its conical form, it takes the thrust with rolling friction, which gives it just the advantage of a wheeled vehicle over a drag, or over a wheel dragged sidewise.

The O'Laughlin screens, by virtue of their order of concentric arrangement, receive the material first on the cylinder with largest holes, and which can be made of very heavy steel, sometimes as much as $\frac{1}{2}$ " thick, although commonly $\frac{1}{4}$ " or $\frac{3}{8}$ " is thought sufficient. The material drops through these large holes very quickly, and then through successively smaller holes, each cylinder intercepting a grade or range of sizes, and separating the grade into oversize and undersize. So each cylinder does effective work on the portion of the entire crushed product for which it is suited, dividing up the work, and doing the screening most thoroughly.

While O'Laughlin screens are used in separations of a variety of minerals, their most extensive use is upon the products of stone crushers, limestone-granite, trap rock, etc., and upon gravel and sand. The usual state of material is fairly dry. Material which balls up, by reason of being miry, sticky, or wet, is just so far unsuited for screening, and if we attempt to screen it without drying or preparation, we must expect to obtain reduced capacity, and proceed with greater difficulty. Material may be flushed through screens by properly directed streams of water, but the O'Laughlin screen is chiefly recommended for fairly dry material. Its success under such conditions has been uniformly good. It is used by many successful quarrymen simply because, as a means of classifying their product for the market, it presents the most profitable investment that can be made. Designed for such customers, it is built for heavy service, with one line of patterns—one quality, and that the best. Several large companies, which installed O'Laughlin screens two or four years ago, and have lately enlarged their plants, have put in more O'Laughlin screens, and these screens have been ordered and placed in steadily increasing numbers, as their merits have become known through announcement in ROCK PRODUCTS and in-

quiry by prospective users of quarrymen who have already installed them.

Two standard sizes of the O'Laughlin screen are built. Each of these has four concentric cylinders and an extension cylinder, which last takes care of the largest size product made, short of the oversize. The capacity of the screens is sometimes increased by lengthening cylinders, and if fewer products are required some of the cylinders may be omitted. The inner cylinder, which is of the heaviest steel plate, is framed with revolving heads, which have rings rolling upon chilled face trunnions. The tractive power is ample, and driving power through trunnion shaft is 2 or 3-horsepower for the smaller and 4 or 5-horsepower for the larger machine. The cylinders are usually arranged to run about 15 revolutions per minute, and are set at an inclination of about $1\frac{1}{2}$ " to the foot. If set higher, a larger capacity of material will be handled, but for effective screening the setting specified seems to be generally acceptable on the ordinary run of stone and minerals. Baffle plates are furnished for connecting the divisions of the screen discharge with chutes, to bins or elsewhere, as the plans of the user may provide.

Every machine built is modified in some particular of range and number of sizes, capacity, screen openings, etc. While for durable service perforated steel plates are preferred, especially for the larger openings, on the dust jackets a larger capacity, with sufficient durability, can be obtained by using wire cloth; and a better capacity, if required, can also be obtained by using oblong or slotted holes. What may be advisable in such matters in any particular case is best developed by correspondence with the makers.

Bulletin No. 140 issued by The Bristol Company, Waterbury, Conn., is a well-illustrated, 50-page booklet, giving detailed information of the Bristol Recording Gauges, for all ranges of pressure and vacuum.

F. H. Parkes, 4320 North Lincoln street, Chicago, has a large list of contractors' equipment for sale, including air compressors, boilers, buckets, cars, concrete mixers, crushers, cableways and conveyors, derricks, drills, engines, hoists, locomotives, pumps, rollers, scrapers and shovels.

Mortar colors should be carefully chosen by contractors when purchasing the rest of their supplies. The pure ore used and the amount of fine grinding done in making the Clinton Mortar Colors make this product one of the most satisfactory on the market. The Clinton Metallic Paint Company, Clinton, N. Y., manufactures this mortar color, and information relative to same will be sent on request to them.

CLASSIFIED ADVERTISEMENTS

Advertisements will be inserted in this section at the following rates:

For one insertion.....25 cents a line
For two insertions.....45 cents a line
For three insertions.....60 cents a line

Eight words of ordinary length make one line.
Heading counts as two lines.
No display except the headings can be admitted.
Remittances should accompany the order. No extra charges for copy of paper containing the advertisement.

EMPLOYEES WANTED

WANTED.

If you are in need of or wish to sell anything which comes under any of these classifications, write us. If you have something not coming under these classifications we will create one for you.

SALESMEN.

Two experienced salesmen, wide acquaintance, calling on mason material dealers regularly want mason supply line on commission basis only. Eastern territory. Actual sales produced on fair proposition.

Address B. H., care ROCK PRODUCTS.

DRILLMAN.

Wanted—First-class Drill Man who understands the use of Ingersoll's Air Drills and can drill in hard trap rock. Also who has had experience in both drilling and blasting. Give reference, state experience and salary wanted. Address

BIG ROCK STONE & CONSTRUCTION CO.,
Little Rock, Ark.

EMPLOYMENT WANTED

FIFTEEN YEARS' EXPERIENCE.

Harry Blum, general manager of the late People's Builders' Supply Co., open for position. Thorough knowledge of all materials. Fifteen years' experience. Age 32. Will make good in any capacity or resign.

1828 Wakeman St., Toledo, Ohio.

SUPERINTENDENT OF QUARRY PLANT.

Seven years' experience as superintendent of quarries and crushing plants. Thoroughly familiar with every detail. Successful in reducing costs.

Address TSS, care ROCK PRODUCTS.

MACHINERY WANTED

WANTED

- 1 50 ton Guy Derrick.
- 1 No. 4 Style "D" Gates Crusher.
- 1 No. 6 K. McCully, Gates or Kennedy Crusher.
- 1 30 ton A. C. Electric traveling crane.
- 1 150 to 200 K. W. Generator and Engine.

Address

F. H. PARKER

4320 No. Lincoln St., Chicago, Ill.

GYRATORY AND ELEVATOR.

Wanted—No. 7½ gyratory and elevator.
Address ELLSWORTH STONE CO., Iowa Falls, Iowa.

MACHINERY FOR SALE

CRUSHER OUTFIT.

For Sale—A complete crusher outfit, used three months, good as new. Will sell for one-half of original cost. Big bargain. Address

HOBBS-NEWBY EQUIPMENT CO., INC., Norfolk Va.

OBSOLETE MACHINERY FOR SALE CHEAP.

- 1 60 light D. C. Arc Machine.
- 1 20 H. P. Gasoline Engine.
- 1 54 inch 60 H. P. Loco. boiler.
- 1 36 H. P. vertical boiler.
- 1 35 H. P. Kewanee Loco. boiler.
- 6 250 H. P. water tube boilers.
- 1 Gates stone crusher, No. 3D.
- 1 No. 00 Chicago mixer on trucks.
- 1 15 ton D. C. 49 ft. traveling crane.
- 1 10 ton stiff leg derrick.
- 1 5 ton steel derrick, electric.
- 1 75 H. P. Atlas simple engine.
- 1 60 H. P. Foos gas engine.
- 1 150 H. P. Russel engine.
- 1 850 H. P. condensing engine.
- 2 650 H. P. Buckeye engines.
- 1 200 K. W. 440 V. generator.
- 2 1,000 K. W. A. C. generators, with engine.
- 4 50 ton steel ladles.
- 25,000 sq. ft. 4 inch triangle mesh.
- 1 40 H. P. 3 phase 440 V. motor.
- 1 75 H. P. 3 phase 440 V. motor.
- 400 ft. 8 inch and 14 inch pipe.
- 2 4x85 ft. stacks.
- 2 5x85 ft. stacks.
- 1 No. 20 cannon R. R. stove.
- 3 25 K. W. transformers.

Address

F. H. PARKER.

4320 N. Lincoln St., Chicago, Ill.

Fast Trains
Day
and
Night
on the

MONON ROUTE

EXCELLENT SERVICE
BETWEEN

Chicago
La Fayette
Indianapolis
Cincinnati
Dayton
West Baden and
French Lick Springs
Louisville

Electric Lighted Standard Sleepers on Night
Trains, Parlor and Dining Cars on Day Trains

Frank J. Reed, G. P. A. E. P. Cockrell, A. G. P.
CHICAGO

[illegible]

HOTEL IMPERIAL

Broadway, 31st and 32nd Streets

New York City

A b s o l u t e l y F i r e p r o o f

Only one block from the New Pennsylvania station and convenient to New York Central.

Across the street is the 33rd Street station of the Elevated, also the newly completed terminal of the Hudson tubes, which connect in 20 minutes with the following important railroads and steamship lines:

North-German Lloyd
Holland-American
Hamburg-American Line
Delaware, Lackawanna
and Western
Lehigh Valley
Erie

The Imperial is the headquarters for members of the cement trades and will be the headquarters for Rock Products during the coming convention.

The minimum rate is \$2.00 per day.

It is important that all delegates who expect to be present during the convention should engage their accommodations at the Imperial as early as possible.

Booklet with tariff on application to Copeland Townsend, Manager.

See Article Elsewhere for Pictorial Story.

Structural Tiles

In All Useful Sizes for Every Kind of Building

Large Stock Ready for Prompt Shipment

FOR DWELLINGS—These tiles combine the long needed essentials of perfect adaptability to every kind of decorative treatment, very high fire resisting value, and extreme low cost as well as economy at the job. With them a permanently sanitary home is built—this cannot be done with any other material.

COUNTRY ESTATES AND FARM BUILDINGS—Economical improvements that show up for every dollar of the cost is obtainable only with this greatest concrete product.

PLASTERED EXTERIORS—A Perfect Plastering surface is provided in concrete tile walls for the spreading of plaster or stucco with absolute certainty of securing strong adhesion of the materials.

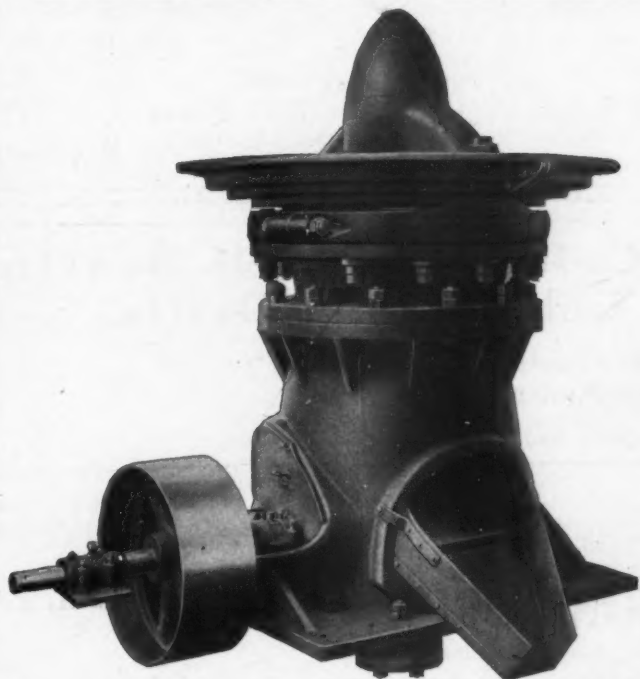
Contractors who use our tiles easily underbid competition.

 Orders booking now for 1911 delivery—Investigate.

Chicago Structural Tile Co.

353 Dearborn St. CHICAGO, ILL.


ALLIS-CHALMERS CO



GATES ROCK AND ORE BREAKERS

The hopper rests directly on the top of the shell, near the upper ends of the concaves, thus reducing the height of the breaker from the foundation to feeding floor.

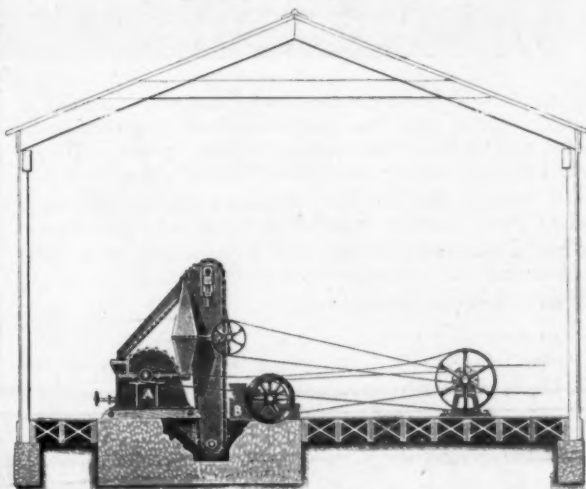
The stone spouts directly from the hopper into the opening between the head and the concaves. This arrangement enhances the feeding capacity, overcomes the tendency to arch, and prevents wear on the spider.

Ask our nearest office  about them.

General Offices: Milwaukee, Wis.

Offices in All Principal Cities.

ALLIS-CHALMERS CO.
Manufacturers of
Crushing and Cement Mach'y
Mining Machinery
Corliss Engines
Gas Engines
Steam Turbines
Hydraulic Turbines
Electrical Apparatus.



Stationary Plant

Don't throw your Limestone Screenings in the Dump!

Make Limestone Fertilizer of same.

There is now a demand for this material; why not turn screenings into MONEY?

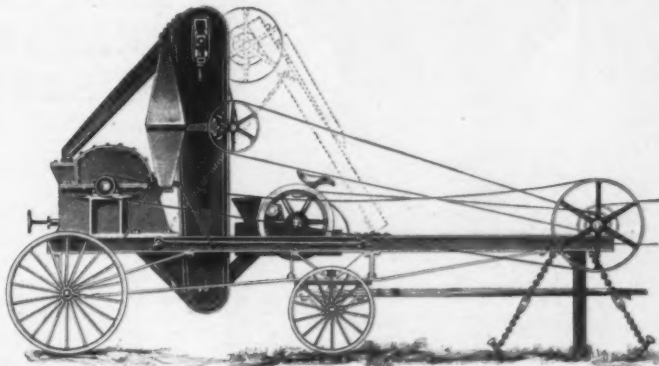
WE Furnish Complete Plants of Any Capacity Desired.

We have 25 plants now in operation.

WRITE FOR BULLETIN NO. 4

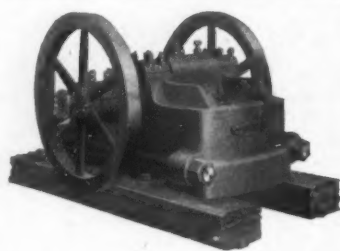
The Williams Pat. Crusher & Pulv. Co.

ST. LOUIS: 2705 N. Broadway
CHICAGO: Old Colony Bldg.
SAN FRANCISCO: 428 Monadnock Bldg.



Portable Plant

Tell 'em you saw it in ROCK PRODUCTS



Large

Capacity,

Low

Cost

Blake Rock Breakers

Fitted with wedge adjustment for taking up the wear, also toggles of different sizes to insert on either side of pitman.

Built in sizes 10x4 to 30x24.

Capacities 4 to 35 tons per hour.

Small

Amount

Power

Required

Write for
Catalogue A4.
It costs you nothing.

Chalmers & Williams, Inc.
Chicago Heights, Ill.



HOWELLS' Celebrated Ball Bearing Heavy Geared Post Drills

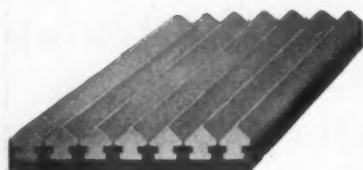
For boring anything that
an Auger will penetrate.

Awarded Gold Medal, St. Louis.

We make 40 different styles machines run by Hand, Compressed Air and Electricity for boring Fire Clay, Coal, Rock, Rock Salt, Gypsum and Plaster Rock. Send today for our handsomely Illustrated Catalogue.

HOWELLS MINING DRILL CO., PLYMOUTH, PA.
U. S. A.
(ESTABLISHED 1878.)

A Tempered Steel Jaw Plate for Blake Type Crushers



Canda Tempered Steel Crusher Jaw Plate

Patented March 31, 1908

CHROME STEEL WORKS

CHROME, N.J., U.S.A.
(FORMERLY OF BROOKLYN, N.Y.)

☞ The Canda Tempered Steel Jaw Plate for Blake Crushers is composed of Forged and Rolled Chrome Steel Bars, cast-welded and also mechanically interlocked into a backing of tough steel—and the wearing face is tempered to extreme hardness. We are equipped to supply both corrugated and smooth face plates for all sizes and makes of Blake Crushers.

☞ The Canda method of cast-welding forged and tempered steel bars into a mild and tough Steel Backing, is adapted also to the construction of Cone Heads for Gyratory Crushers, Segments for Corrugated Rolls, etc., etc.

☞ Our products in this line are sold with our special guarantee that they *will wear longer, give better satisfaction and, at our price, prove more economical than any others now on the market.*

— Send for Descriptive Pamphlet —

Represented by

J. F. Spellman, 202 Century Building, Denver, Colo.

George T. Bond, Easton, Pa.

George W. Myers, San Francisco, Cal.



AUSTIN GYRATORY CRUSHER

The World's leading rock and ore breaker.

The only self lubricating Crusher.

The only Crusher having double countershaft bearing.

Simple construction, correct design.

Thousands in use.

Plans and specifications furnished for any sized plant.

Send for Catalogue No. 17.

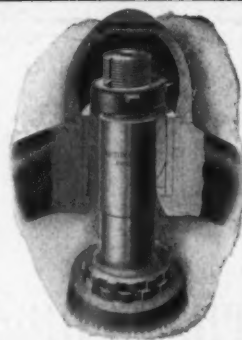
All experienced users recognize that the efficiency and durability of the suspension bearing as applied to Gyratory Crushers, depends upon locating the bearing at the point of least gyration or movement of the main shaft.

A perfect suspension can be made only by locating the bearing at the point where there is no movement of the shaft. That being a mechanical impossibility it follows that superiority is obtained in fixing the bearing at the point of least gyration of the shaft.

As the accompanying cut will show, the movement of the shaft at the point of suspension in the Austin Crusher is reduced to the minimum and practically eliminated. Consequently the highest possible degree of efficiency and durability is obtained.

Austin Manufacturing Co., Chicago

Mussens Ltd., Montreal, Can., Canadian Sales Agents.



New York City Office
1652 FULTON BUILDING
Hudson Terminal

Tell 'em you saw it in ROCK PRODUCTS

The Statler Stone Company

CRUSHED STONE GROUND LIMESTONE FURNACE FLUX
RUBBLE, BUILDING AND CUT STONE

PIQUA, OHIO.
August 10/1910.

Smith Co.,
A. M. Fitzsimmons, Sales Mgr.
Milwaukee, Wis.

In reply to your favor of the 19th would
we appreciate an opportunity to express our
to the #7 1/2 Symon's Gyratory Crusher, which
is our new plant along in January of 1909.

This machine has been in constant use
first started at an expense for repairs of
nothing. It will take in a piece of rock
a large as the old-fashioned Gyratory was
sated capacity. The method of lubrication
is simple and dust-proof. A practical quar-
and the advantage obtained by feeding
and yet this work is accomplished with
power than is required in the con-
ry Crushers.

we were greatly pleased to note
et for six Symon's Crushers in
crete material for the improve-
think of no reason why the Sym-
ake its place where it deserv-
er Manufacturing trade.

Yours truly,
THE STATLER STONE CO.
Per *[Signature]*

THE HOKE COMPANY
(INCORPORATED)
GENERAL CONTRACTORS,
LOUISVILLE, KY.

Sept 3-10

Mr. A. W. Fitzsimmons
Sales Mgr. T. L. Smith Co.

Dear Sir

It affords me pleasure to say our
#5 Symon's Crusher has and is giving us
satisfaction. We have just completed a lot
of crushing 900 cu yds. of the hardest lime-
stone in Jefferson Co. Ky, we averaged
160 cu yds. 1 1/2 hours per day, without an hour
delay caused by the Crusher.
I have run his other styles Gyratory Crushers
also jaw machines none of which ever
gave better results.

Yours Truly
[Signature]

Kushville Railroad and Light Company
NASHVILLE, TENN. August 20th, 1910.

Mr. A. W. Fitzsimmons,
c/o T. L. Smith Company
Milwaukee, Wis.

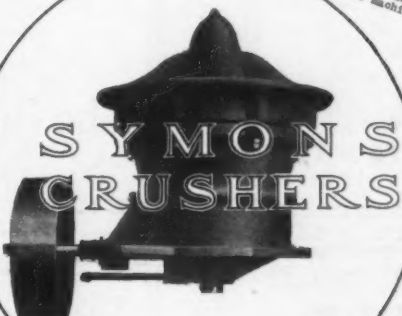
Dear Sir:-

Yours of the 19th inst., to hand. Will say that we
have no reason to regret the adoption of the Symon's crushers, and
are thoroughly satisfied with our plant, and should we ever see fit
to increase our crusher capacity would install the Symon's machine.
Our rock crushing plant is giving entire satisfaction and so far
are in favor of and prefer your crushers.

truly yours,

[Signature]
Roadmaster.

all portable com-



DITTLINGER LIME CO.
MANUFACTURERS OF
SNOW DRIFT
HYDRATED LIME
CRUSHED STONE IN ALL SIZES

The T. L. Smith Company,
Gentlemen:
Milwaukee, Wis.

It affords us pleasure to answer your let-
ter of the 19th inst. wherein you ask us to give you
a honest expression on the No. 5 Symon's Gyratory Crusher
that we purchased of you some time ago.

When the writer referred your letter to our
Supt. for his opinion he was told to write you and we
here repeat his own words.
"You just simply can't say too much in
praise of this machine for it has given us the very
best satisfaction and service from the minute we put
it to work."

The above is our endorsement of the No.
5 Symon's in a nut shell. The machine has been running
smooth and nice with the minimum of trouble and so far
we have had no breakage whatever.

As you know recently we increased our cap-
acity by the addition of a Symon's Hise Crusher, and for
the present do not contemplate any further improve-
ment but whenever we decide to put in another crusher
we will be a Symon's Gyratory.

Thanking you kindly
congratulating you on the
your machines, we are

THE PORTAGE SILICA CO.
SILICA SAND AND GRAVEL

YOUNGSTOWN, OHIO. Aug. 23, 1910.

The T. L. Smith Co.,
Gentlemen:
Milwaukee, Wis.

The No. 7 1/2 Symon's crusher, which you furnished us
the past spring, has proven entirely satisfactory. It has
done all the work that we have asked it to do, and is not
nearly up to capacity. We have not put through it more
than 75 tons per hour at any time, but have no doubt, what-
ever, that we could, at least, double this amount and very
probably exceed it.

Yours very truly,

THE PORTAGE SILICA CO.

Per *[Signature]*
Gen. Mgr.



The United States Portland Cement Company
SILICA SAND AND GRAVEL
NEW YORK OFFICE: 100 FIFTH AVENUE
CHICAGO OFFICE: 100 N. LAKE STREET
CINCINNATI OFFICE: 100 N. LAKE STREET
COLUMBUS OFFICE: 100 N. LAKE STREET
DAYTON OFFICE: 100 N. LAKE STREET
DETROIT OFFICE: 100 N. LAKE STREET
INDIANAPOLIS OFFICE: 100 N. LAKE STREET
KANSAS CITY OFFICE: 100 N. LAKE STREET
LOUISVILLE OFFICE: 100 N. LAKE STREET
MEMPHIS OFFICE: 100 N. LAKE STREET
MINNEAPOLIS OFFICE: 100 N. LAKE STREET
MILWAUKEE OFFICE: 100 N. LAKE STREET
PITTSBURGH OFFICE: 100 N. LAKE STREET
RICHMOND OFFICE: 100 N. LAKE STREET
ST. LOUIS OFFICE: 100 N. LAKE STREET
ST. PAUL OFFICE: 100 N. LAKE STREET
TAMPA OFFICE: 100 N. LAKE STREET
WASHINGTON OFFICE: 100 N. LAKE STREET
WHEELING OFFICE: 100 N. LAKE STREET
WICHITA OFFICE: 100 N. LAKE STREET
YOUNGSTOWN OFFICE: 100 N. LAKE STREET

CONCRETE CO. Aug. 27, 1910.

T. L. Smith & Co.,
Milwaukee, Wis.

Gentlemen:

Assuming your communication of Aug. 20th
relative to the performance of the No. 6 Symon's
Crusher, recently purchased from you, will ad-
vise that we have had the same in use for about
three months, with excellent results. The per-
formance of this crusher was determined by the ex-
cellent performance of the No. 5 Symon's crusher
that we have had in use for approximately two
years and we are pleased to testify as to the
merit of your crushers.

Very truly yours,
THE UNITED STATES PORT-
LAND CEMENT CO.

ANDERSON HYDRAULIC CONSTRUCTION COMPANY
ENGINEERS & CONSTRUCTORS

Resere. T. L. Smith Co.,
Majestic Bldg.,
Gentlemen:-
Milwaukee, Wis.

Poston, Sept. 6/10.

We beg to advise you that in July 1909 you shipped to us
for use at Douglas, Wyoming, one 4-Symon's Gyratory Rock Crusher with
the capacity of 200 tons per day, and also one of your smaller size
of jaw crusher, with a capacity of 75 tons per day.
These crushers were in constant use for a period of a year
and a half. They have given entire satisfaction and met fully the
requirements with a minimum expense for repairs.

We are entirely satisfied with the operation of these crushers
and expect to place an order for others on our southern work in the near
future.

Yours very truly,

ANDERSON HYDRAULIC CONSTRUCTION CO.,
[Signature]

The T. L. Smith Co.,
Gentlemen,
We are still running the same No. 5 Symon's Crusher,
the Carter City Sand Co. bought from you five years ago
and it is doing good work.

AMERICAN SAND & GRAVEL CO.,
CINCINNATI, OHIO.
Sept. 6th, 1910

Write for Catalog No. 166

THE T. L. SMITH COMPANY

1322 Majestic Bldg. - - - MILWAUKEE, WIS.
Old Colony Bldg. - - - CHICAGO, ILL.

Tell 'em you saw it in ROCK PRODUCTS



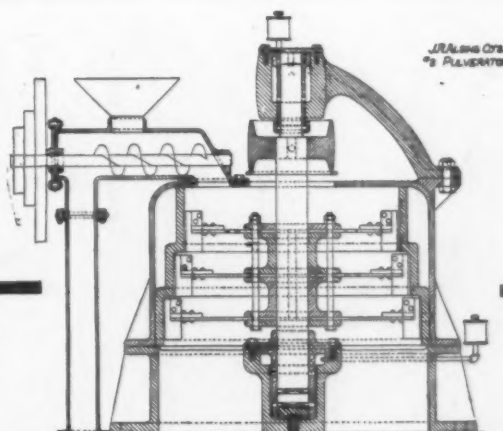
95-C IN SANDUSKY PORTLAND CEMENT COMPANY'S QUARRY!

Bucyrus Shovels Are Loading Crushed Stone and Digging Blasted or Unblasted Cement Rock in the Leading Quarries in the United States.

THE BUCYRUS CO.

Branch Offices:
NEW YORK
SAN FRANCISCO
CHICAGO
DENVER
SPOKANE

P. O. Box T
South Milwaukee, Wis.



THE ALSING PULVERATOR No. 2

These machines are designed for very fine grinding and will reduce the material from a 2½ inch size to an impalpable powder. The grinding is done by the percussion principle instead of abrasion, etc., as in other makes. These Pulverators have demonstrated by actual use a great saving in cost of wear, tear, and maintenance. Simple in construction with fewer intricate parts to get out of order. They are so substantially constructed they will last a lifetime.

The J. R. Alsing Engineering Co.

INCORPORATED

190½ WEST STREET, NEW YORK

VULCAN STEAM AND ELECTRIC SHOVELS



Giant Class "D" 85 Ton Shovel Loading Blasted Rock

For general excavating, loading blasted and unblasted rock, grading, stripping, tunneling, sewer trench digging, etc.

Traction wheels or railroad trucks.

Steam or electric power.

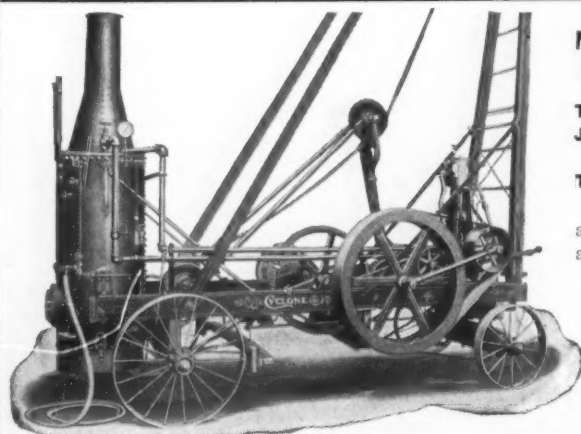
All standard sizes, ½ to 5 cubic yard dippers.

Revolving types, ½ to 1½ cubic yard dippers.

WRITE
TODAY FOR
FULL INFORMATION

THE VULCAN STEAM SHOVEL CO., TOLEDO, OHIO

Tell 'em you saw it in ROCK PRODUCTS



The Cyclone Wins Again

THE CONSTANT WINNING OF CONTESTS BY THE CYCLONE DRILLS DOESN'T JUST HAPPEN—there is a reason for it.

The **CONSTRUCTION**, **MATERIAL** and **PRINCIPLE** which enter into these drills are **THE REASONS**.

The test completed in the quarry of the U. S. Crushed Stone Company, at McCook, Illinois again demonstrates the superiority of the Cyclone drill from point of speed and maintenance; it adds another link in the chain of evidence that Cyclone drills are built right and run right.

This is the reason why the U. S. and Canadian Governments, as well as the largest quarry people and railroad contractors, buy Cyclones.

WRITE US TO-DAY—DEPT. "20"

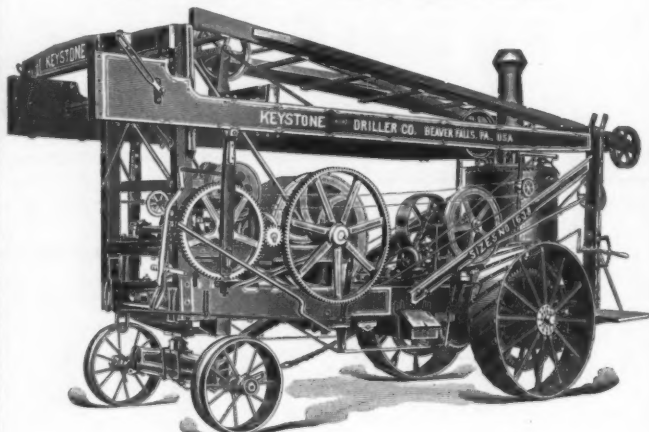
THE CYCLONE DRILL COMPANY,

ORRVILLE, OHIO

CHICAGO OFFICE—419 Fisher Bldg.

NEW YORK OFFICE—1456 Hudson Terminal Bldg.

For Big Blast Holes KEYSTONE CABLE DRILLS



Catalog No. 4

Keystone Traction Drill Co.

Monadnock Bldg.,
CHICAGO

BEAVER FALLS, PA.,
170 Broadway, New York

CARTHAGE,
MISSOURI

OUR distinctive policy of being originators instead of copyists, leaders instead of followers, has resulted in establishing a reputation for the

Trade **TISCO** Mark

that makes it synonymous with economy and good service.

Steam Shovel Parts such as Teeth, Lips, Racks, Pinions and Dipper Bands when made of

Tisco Manganese Steel

will wear longer and give greater service than can be secured from other steels.

Your own interests should lead you not to buy steam shovel parts until you have investigated the castings that will prove themselves best for your work.

TAYLOR IRON & STEEL CO.
High Bridge, N. J.



Deep Blast Hole Drilling

Is accomplished more economically than by any other method with the **“American”**

“American” Drilling Machines

There is 40 years' experience behind these drills—they are standard. Where electric power is available, equipped with motor they form the most portable and economical drill for quarry use.

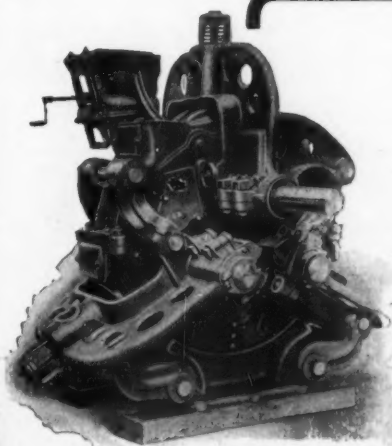
Equipped with any power they are backed by the experience and reputation of the world's oldest and largest builders of this kind of drilling machinery.

Tell us your blast hole requirements. We have 59 regular styles and sizes of machines for your selection, made in types to meet every possible condition of work. Write for our new catalog No. 105, the most complete “Drill-Hole” catalog ever issued.

THE AMERICAN WELL WORKS

General Office and Works: AURORA, ILL., U. S. A. Chicago Office: First National Bank Building

Tell 'em you saw it in ROCK PRODUCTS



MAXECON

Means MAXimum of ECONomy

Years of experience with the assistance of our hundreds of customers has found THE SOLUTION OF GRINDING HARD MATERIALS. The MAXECON PULVERIZER combines highest EFFICIENCY, greatest DURABILITY and assured RELIABILITY. Uses the LEAST HORSE POWER per capacity. Embodies the features of our Kent Mill with improvements that make it MAXECON.

WE DO NOT CLAIM ALL of the CREDIT for this achievement

We have enjoyed the valuable suggestions of the engineers of the Universal Portland Cement Co. (U. S. Steel Corp.), Sandusky P. C. Co., Chicago Portland C. Co., Marquette Cement Mfg. Co., Western P. C. Co., Cowham Engineering Co., Ironton P. C. Co., Alpena P. C. Co., Castalia P. C. Co., Pennsylvania P. C. Co., and many other patrons.

THE RING WOBBLES

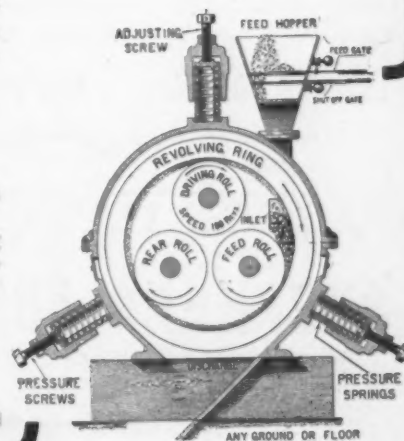
The FREE WOBBLING POUNDING RING instantly and automatically ADAPTS its position to the variations of work.

Its GRINDING ACTION is DIFFERENT than any other; besides the STRAIGHT rolling action of the rolls, the SIDE to SIDE motion of the ring makes the material subject to TWO crushing forces and DOUBLE OUTPUT results.

See it at the Cement Shows: NEW YORK, Madison Square Garden, Dec. 14-20, 1910
CHICAGO, Coliseum, February 17-23, 1911

KENT MILL CO.

170 BROADWAY, NEW YORK CITY
LONDON, W. C., 31 HIGH HOLBORN
CHARLOTTENBURG 5, WINDSCHEID STRASSE 31, BERLIN



In Producing Cement Clinker, what is YOUR Grinding Cost?

A statement is being advertised that "5 mills, grinding enough raw material to produce nearly 1,200 barrels of clinker per day is a record."

NOW

We will guarantee (and our guarantee is worth something) that **3 Raymond Roller Mills** will grind enough raw material to produce fully 1,200 barrels of clinker per day.

Moreover—

The Raymond Mills will take the material direct from crusher or rolls and thus save the expensive preliminary grinders necessary with other types of mills.

Furthermore—

We will also guarantee that the finished product from the Raymond Mills will be 98% 100 mesh fine and 92% 200 mesh fine.

If you are going to install grinding or separating machinery for handling cement or any other material you can not afford to act without having a talk with us.

RAYMOND BROS. IMPACT PULVERIZER CO.

517 Laflin Street, Chicago

Tell 'em you saw it in ROCK PRODUCTS



Better Screening

Are You Satisfied with Your Screening?

The problem of screening materials quickly and thoroughly in small space is solved by the

VIBRAONE SEPARATOR

The merit of this device has been proven in its ability to produce clean, uniform separation from 3 to 100 meshes per inch, with the additional feature that it is **dustless**.

LARGEST CAPACITY, PERFECT DISTRIBUTION

The Vibracone will screen more material per hour than any other machine made.

WRITE FOR PARTICULARS AND CATALOG

STEPHENS-ADAMSON MFG. CO.
 164 Dearborn St., Chicago
 50 Church St., New York
AURORA, ILL.

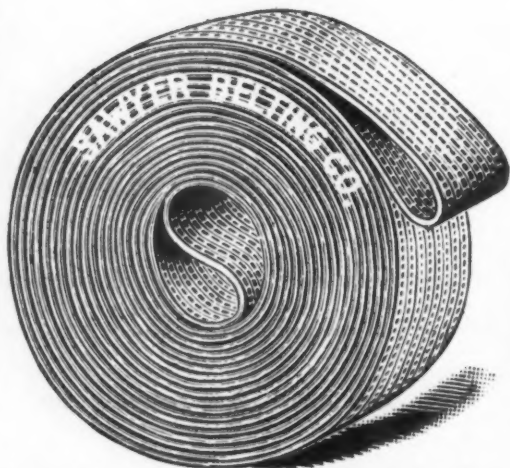


Total Height of
Vibracone,
8 ft. 9 in.

Weight, 3000 lbs.

Power to Operate,
1-2 H. P.

THE ONLY WAY



TO APPRECIATE THE
ECONOMICAL VALUE

OF SAWYER STITCHED
 CANVAS BELTING IS TO

**GIVE IT A TRIAL. IT'S
 BEEN MAKING GOOD
 FOR TWENTY YEARS.**

FOR FLAT, TROUGH, OR BUCKET ELEVATING, MAIN DRIVING, IT HAS PROVEN ITSELF TIME AND TIME AGAIN

A GENUINE MONEY SAVER

ADDRESS ENG. DEPT.

SAWYER BELTING CO.

CLEVELAND, O.

Tell 'em you saw it in ROCK PRODUCTS

MACHINERY

—FOR—

Industrial Plants



We manufacture machinery for transmitting power, and for elevating and conveying materials in and about cement plants, rock crushing plants, lime plants, mortar works, plaster works, and other industries.

We manufacture screw conveyors, belt conveyors, and all sorts of chain and cable conveyors, for handling rock, lime, sand, etc.

We manufacture elevators, also, for handling the same kinds of material. Our lines include shafting, couplings, bearings, collars, pulleys, gears, rope sheaves, sprocket wheels, elevator buckets and bolts, steel elevator casings, etc.

We have our own foundry, sheet metal department and machine shop. We employ first-class help in all departments and use high-grade materials.

When you are in need of anything in our line, try us.

Catalog No. 34

H. W. Caldwell & Son Co.

17th St. and Western Ave., Chicago

Fulton Bldg., Hudson Terminal, No. 50 Church St
NEW YORK CITY

Rubber Belting Troubles Overcome

Every difficulty heretofore met with in the use of rubber belting entirely eliminated in

"R. F. & C." (Rubber Filled and Covered) Solid woven rubber belting.

Ask us for sample and further information.

W. H. SALISBURY & CO., Inc.

Est. 1855

166-168 Wabash Ave., Chicago, Ill.



We've been manufacturing the Gandy Stitched Cotton Duck Belt for 34 years. The reputation it has established in that time is a guarantee in itself.

But we want to do more than merely refer you to what we've accomplished in the past.

We give you an absolute guarantee with every inch of the Gandy Belt sold as to materials and workmanship.

We do this so you can have complete confidence in giving The Gandy Belt a trial. When you do, we'll class you as a user, for a trial is all that is needed to make a permanent user.

For driving elevating and conveying purposes The Gandy Belt is the most durable and economical. Unaffected by heat, water, steam or atmospheric changes. It is one-third the cost of leather and 25% cheaper than rubber, while it will do the work equally as well.

This is Gandy's reputation in a few words. The most serviceable belt and at the same time the cheapest.

Now that's why the Gandy will save money for you.

Write for our free booklet and let us prove what we say.

Write right away.

The Gandy Belting Company

744 West Pratt Street

Baltimore, Md.

New York Office: 88-90 Reade St.

Important!

If you men of Stone, Rock and Ballast who close down your plants during the severe winter months, will make it a point when suspending operations to examine your

LEVIATHAN BELTS

and other brands that you may have in use, then make it a point to note their comparative conditions when you begin operations for the next season, you will then make it a point to specify LEVIATHAN on your further orders for Belting.

LEVIATHAN is improved by age. Other Belts are disproved.

Main Belting Company

Philadelphia, Chicago, New York, Boston, Pittsburgh, Montreal

"NESTOR"

UNSURPASSED FOR ECONOMICAL

ELEVATING — TRANSMISSION — CONVEYING

AGENTS IN ALL PRINCIPAL CITIES

THE AMERICAN FABRIC BELTING COMPANY

CLEVELAND, OHIO.

Tell 'em you saw it in ROCK PRODUCTS

Reilly Multicoil Feed Water Heaters



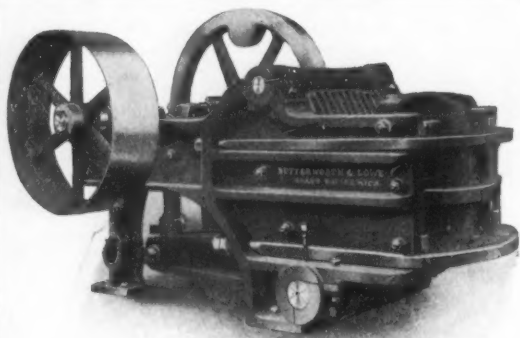
are different from all the other coil Heaters ever made; their tubes are **removable** without disturbing pipe connections. Ground union joints and flexible coils make a Heater that lasts, and needs no repairs, either expensive or inexpensive.

The Thompson Evaporative Condenser gives the economy due to condensing without increasing the water supply. This is wonderful but absolutely true. Ask us for estimates.

We make also the Stratton Steam Separator, the Goubert Feed Water Heater and the Osborne Pneumatic Separating and Collecting Systems.

Write for catalogues of the lines which interest you.

The Griscom-Spencer Co., 90 West Street
NEW YORK



Nippers—made in 3 sizes.

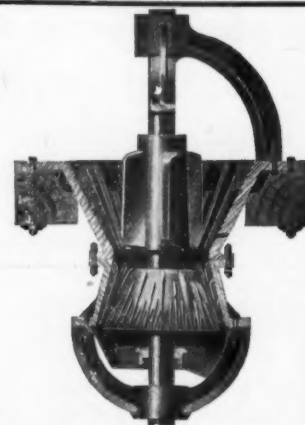
Jaw and Rotary CRUSHERS

For all Rocks and Ores Softer than Quartz

GYPSUM MACHINERY— We design modern Plaster Mills and make all necessary Machinery, including Kettles, Nippers, Crackers, Buhrs, Screens, Elevators, Shafting, etc.

Special Crusher-Grinders for Lime

Butterworth & Lowe
17 Huron Street, Grand Rapids, Mich.



Crackers—5 sizes—many variations.

GET THE BEST

Finest Line of Gypsum Machinery

MADE

KETTLE CRUSHER NIPPERS

ASK FOR CATALOG OF

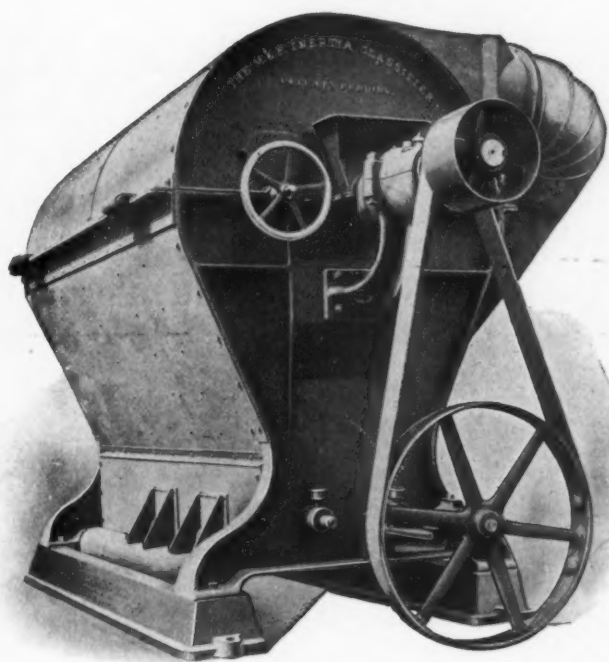
MOGUL NIPPERS. OPEN DOOR POT CRUSHERS

Best Mills in the United States Have Them

MCDONNELL BOILER & IRON WORKS, Des Moines, Iowa, U. S. A.

"Formerly Des Moines Mfg. & Supply Co."

Tell 'em you saw it in ROCK PRODUCTS



PATENTS PENDING

FEW FACTS

ABOUT

The Morscher-Ehrsam Inertia Classifier

Adjustable for making separations from 80 mesh to 200 mesh.

Intake capacity from 5 to 10 tons per hour

Separations as positive as can be made on screens, with no perceptible variations in product owing to the variations of the speed or load.

Requires no more space than a Reel or Screen and the capacity is 20 times as great.

Material can be spouted direct from elevator head into machine.

No dust collectors or air spouts required.

We recommend its use in connection with gradual reduction on all classes of material where fine product is required. Write for more information.

Manufacturers of Jaw and Rotary Crushers for Gypsum, Vibrating Screens, Hair Pickers, Wood Fibre Machines, Calcining Kettles, Plaster Mixers, Power Transmission

The Enterprise Vertical Burr Mill

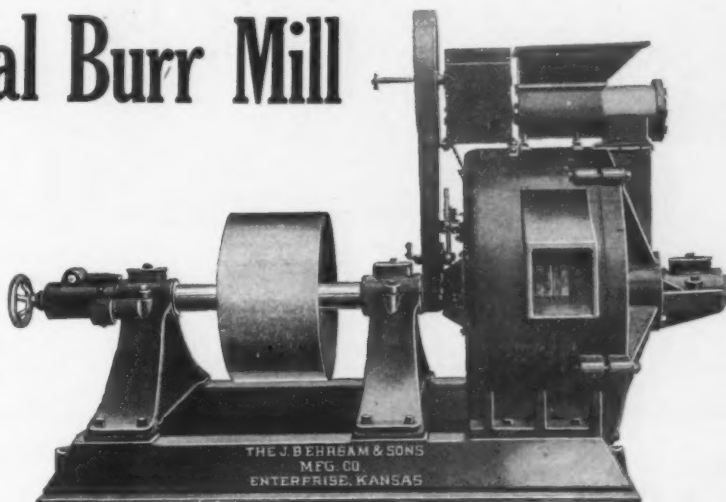
is especially designed for grinding gypsum, limestone, coal, coke, paint, rock, foundry facing, carbon, salt, and other similar substances.

It is **STRONG** and **DURABLY** built.

Has **INTERCHANGEABLE STONES**, which can be easily removed for dressing and replaced.

Is provided with our **POSITIVE CONTROLLABLE FEEDER**, which feeds an absolutely uniform stream into the mill at the required capacity.

**MANY OTHER
ADVANTAGES.**



The J. B. Ehrsam & Sons Mfg. Co.

Designers and Builders of

Complete Equipment for Plaster Mills

ENTERPRISE, KANSAS, U. S. A.

Tell 'em you saw it in ROCK PRODUCTS

Improved
Modern
Lath



Fire-Proof
Insulating
Sound-Deadening

KING'S FIBROUS PLASTER BOARD

Standard Size 32" x 36" x 1/2"

By its superior **Strength** and **Toughness**
furnishes the Building Trades that which
they have been demanding for so long.



MODEL NEW ENGLAND RESIDENCE
Edward T. Hapgood

I have your letter of April 7th which I should have answered before. It gives me great pleasure to tell you how satisfactory your King's Fibrous Plaster Board has proved in the case of my own house. I have lived with it now nearly a year and it is certainly standing up in a most perfect manner. As I told you a while ago, shortly after moving into the house the foot tub in my bath room over-flowed and a good deal of the water soaked into the ceiling of the living room. This ceiling was more than a week in drying out but has shown absolutely no ill effects from the soaking.

Inasmuch as the wetting of this material offered the greatest chance of trouble with it, it seems to me that I have given it a very good test, and I feel very confident in recommending it to clients and in specifying it for my work.

Wishing you continued success, I am,

Yours very truly,

Edward T. Hapgood.

SERVICE The location of our works at the greatest railroad terminus in the East and our several warehouses enable us to make **Prompt Shipments at all times.**

J. B. KING & CO.

Plaster Board Department:

17 State Street, New York, N. Y.
161 Devonshire St., Boston, Mass.

WAREHOUSES:

Boston, Mass. Providence, R. I.
Chester, Pa. Hartford, Conn.
Norfolk, Va. Buffalo, N. Y.
Brunswick, Ga.

WORKS:

New Brighton, Staten Island,
NEW YORK

Tell 'em you saw it in ROCK PRODUCTS

Stucco Retarder

Strong
Uniform
Fine Ground

RETARDER

We are the oldest Retarder firm in the United States, and above is our motto. New fire-proof plant and prompt service.

FREE SAMPLE ON REQUEST

Chemical Stucco Retarder Co.

WEBSTER CITY, IOWA.

INCORPORATED 1895

CUMMER CONTINUOUS PROCESS

FOR

**CALCINING
GYPSUM**

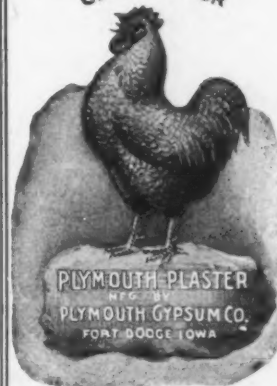
NO KETTLES
USED

PLANTS IN
OPERATION

Great Saving in Cost of Manufacture and Quality of
Product Guaranteed.

The F. D. CUMMER & SON CO., Cleveland, O.

CROWING FOR



**PLYMOUTH
CEMENT**

AND

**WOOD FIBER
PLASTER**

The Brand that's Made from Pure
Gypsum Rock

WRITE US FOR PRICES AND
ADVERTISING MATTER

Plymouth Gypsum Co.

Fort Dodge, Iowa

RETARDER Wood Fiber

THE OHIO and BINNS RETARDER CO.
PORT CLINTON, OHIO

Reliable Stucco Retarder=Strong=Uniform in Strength=
Duplicate power plant (electric and steam power) installed so as to preclude any possibility of shut down and consequent shut down of mixers who depend upon us for their supply of Retarder. We have a capacity large enough to supply every retarder user in the U. S. and Canada, and some to spare for Europe. Our mills are fireproof in every particular. Write us for prices and information.

THE OHIO and BINNS RETARDER CO.
PORT CLINTON, OHIO

Tell 'em you saw it in ROCK PRODUCTS

\$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢

¢ **NIAGARA** ¢

IS THE BRAND

We cannot dwell too strongly upon the increased bulk and consequent greater covering capacities of our "NIAGARA" line of wall plasters, their favorable working qualities under the mechanics' tools and final strength.

Niagara Neat Cement

Niagara Sanded Mortar

Niagara Wood Fibre (Wood Pulp)

Dealers realize the additional dollars in the handling of our products because of their preference by the trade and good sense is displayed in pushing their sale. MIXED CAR LOAD SHIPMENTS of wall plasters, hydrated finishing lime, plaster board, land plaster, and calcined plaster for finishing purposes.

ALL BUSINESS DIRECT WITH SALES OFFICE.

NIAGARA GYPSUM CO.
BUFFALO, N.Y.

¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$ ¢ \$

KING'S WINDSOR CEMENT FOR PLASTERING WALLS AND CEILINGS

Buffalo Branch, CHAS. C. CALKINS, Manager
322 W. Genessee Street.

Not the hardest, but the toughest and best Wall Plaster made—Can be applied with less labor. Has greater covering capacity than any other similar material

J. B. KING & CO., 17 State Street, New York.

Robert W. Hunt Jno. J. Cone Jas. C. Hailstead D. W. McNaugher
ROBERT W. HUNT & CO., Engineers
Bureau of Inspection, Tests and Consultation
New York—90 West St. Chicago—1121 The Rookery. Pittsburgh—Monongahela Bank Bldg
London, E. C., Eng.—31 Norfolk House. San Francisco—425 Washington St.
Montreal—Can. Exp. Bldg. St. Louis—Syndicate Trust Bldg. Mexico City, Mex.—20 San Francisco St.
Tests and Inspection of Cement—Reinforcing Steel and all Cement Materials and
Products—Supervision of Construction and Tests of Concrete Structures—Reports on
Cement Properties and Existing Concrete Structures—Design of Cement Plants and
Inspection of Cement Machinery—Chemical and Physical Testing Laboratories
"All Manner of Tests on all Classes of Material"

THE FULLER ENGINEERING CO.
DESIGNING, CONSTRUCTING AND OPERATING
ENGINEERS ANALYTICAL CHEMISTS
CEMENT MILLS A SPECIALTY
OFFICES: ALLENTOWN NAT. BANK BLDG. ALLENTOWN, PA.

Dealers
or
Contractors:
Write for
Samples,
Prices and
Particulars.
You will be
Interested

We Carry a Full Assortment of Sizes of

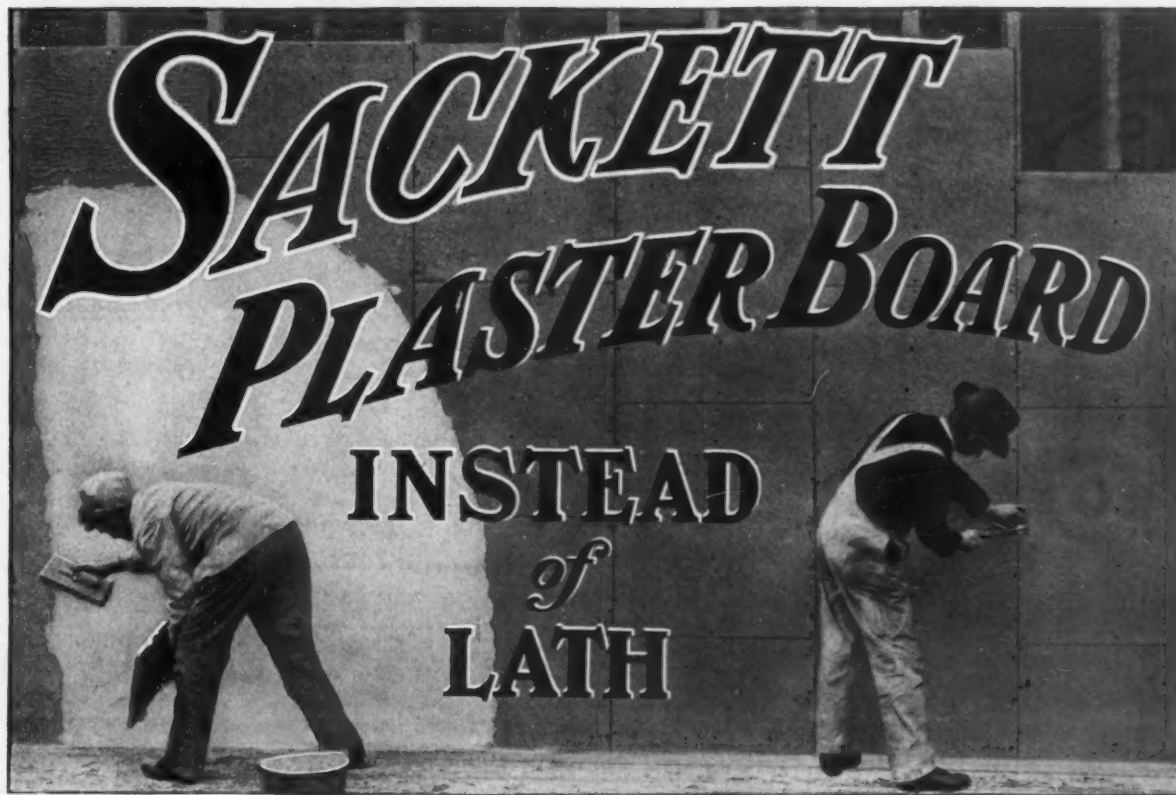
Beaver Board

The Most Beautiful, Durable and Economical Covering
for all Kinds of Walls and Ceilings. Takes
the Place of Lath and Plastering.

**WISCONSIN
LIME &
CEMENT CO.**
Selling Agents and
Distributors
607 Chamber of Commerce
Chicago, Ill.

Tell 'em you saw it in ROCK PRODUCTS

Good Judgment Demands



THE VOICE OF EXPERIENCE

There's nothing new fangled about SACKETT Plaster Board. It has stood the test of time, demonstrating its superiority over other methods of lathing—received and approved by the entire building world.

SACKETT PLASTER BOARD

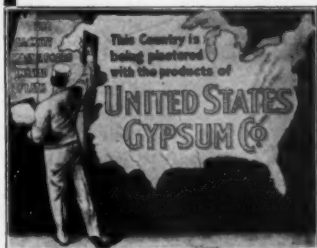
Fireproof Soundproof Verminproof

is a staple, quick selling commodity in every up-to-date dealer's line. The reason for its rapidly growing demand is self evident—natural demand of architects and builders generally for

BETTER! SAFER! MORE SANITARY WALLS!

If you don't know SACKETT Plaster Board and its many advantages, do yourself the justice to get the facts immediately—facts of vital interest—and profit to you.

We can help you help yourself—Send for the facts at once.



United States Gypsum Company

New York Cleveland Chicago Minneapolis Kansas City San Francisco

Tell 'em you saw it in ROCK PRODUCTS

Plaster Quality

The highest perfection in the
production of plaster
has been reached
by the

Dakota Plaster Company

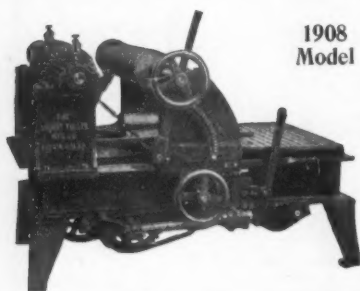


Why?
Listen:

The Dakota Plaster Company's deposits are 98 per cent Pure Gypsum. Its plant, built in 1910, was erected without regard to cost, and is one of the best equipped and latest improved plaster mills in the world.

The Dakota Plaster Company
Black Hawk and Rapid City, S. D.

The Shuart-Fuller Improved Fiber Machine



1908
Model

Has an automatic, proportional, increasing feed, which keeps grade of fiber uniform from start to finish, and holds machine to highest possible rate of production for the grade of fiber and number of saws. Does not begin with fiber and end with dust, nor fall off in rate of production on each log, from 40 to 80 per cent as do the ordinary non-increasing feed machines. Works logs up to 24x24 inches. No royalty string attached to sale. Pay no attention to misrepresentations of our competitors, but write for descriptive circular and terms to

The Shuart-Fuller Mfg. Co.
ELYRIA, OHIO

THE SHUART-FULLER CO., Elyria, Ohio.

Gentlemen:—We are just in receipt of advice from our New Mexico plant wherein they state that the Wood Fiber Machine recently shipped by you is doing all that we have asked of it and running very fine.

ACME CEMENT PLASTER CO.,
By Jas. R. Dougan, Sec.

THE F. D. CUMMER & SON COMPANY.

A. E. CUMMER, Pres. & Treas.
F. D. CUMMER, Vice Pres. & Secy.

MANUFACTURERS OF

CABLE ADDRESS: CUMMER/CHICAGO.

THE CUMMER DRYERS, CALCINERS, ROASTERS & ASPHALT PLANTS.

CLEVELAND, OHIO, May 4, 1910.

Rock Products Co.,

Chicago, Ill.

Gentlemen:—

Yours of the 3rd instant received.

We think very highly of your paper as an advertising medium for meeting the gypsum and crushed rock trade. We are very well pleased with the results obtained as is evidenced by the fact that we continue to advertise with you.

Yours very truly,

[Signature]
President.

Tell 'em you saw it in ROCK PRODUCTS

It Pays to Advertise in ROCK PRODUCTS

SPECIAL NOTICE—All orders are accepted subject to delay occasioned by causes beyond our control and with the understanding that no claims for damages or losses will be allowed. Our liability ceases when goods are delivered to carrier. Address all letters to the company.

A. E. RAYMOND, Pres. and Treas.

C. M. LAURITSEN, V.-Pres. and Secy.

F. C. SPRING, Mgr.

THE

RAYMOND BROS. IMPACT PULVERIZER CO.

ROLLER MILLS, AUTOMATIC PULVERIZERS
VACUUM AND SCREEN SEPARATORS
SPECIAL EXHAUST FANS

TELEPHONE MONITOR 1200
CABLE ADDRESS: "IMPACT"

OFFICE AND WORKS
220 LAFAYETTE STREET
1200 W. HARRISON STREET

CHICAGO ADVERTISING BUREAU
NEWSPAPER DEPT.
PRINTING DEPT.
1200 W. HARRISON STREET

CHICAGO, May 6, 1910.

Rock Products,

355 Dearborn St.,

Chicago.

Gentlemen:

In reply to your inquiry of May 3rd, we have carefully checked up our records and are pleased to advise that the inquiries we have received as a result of our Ad. in your paper cost us less than from any other high class medium in which we advertise and we have been able to trace some profitable business closed through our advertisement.

Trusting this covers the ground to your satisfaction, we remain,

Yours very truly,

RAYMOND BROS. IMPACT PULVERIZER CO.

[Signature]
V.P. & Mgr.

All agreements are contingent upon strikes, accidents, or other delays beyond our control.



CABLE ADDRESS: "HERCULES" ROCHESTER, N.Y.
WESTERN UNION CODE

293-309 ST. PAUL STREET

Rochester, N.Y.

5/21/10

Mr. Bernard L. McNulty,

Francis Publishing Co.,

Chicago, Ill.

Dear Sir:—

In answer to your favor of the 3rd, would state that we have been almost continuous advertisers in Rock Products since the year of 1905 and while not the largest advertisers, we have always felt that the publication paid us handsome returns on the amount expended and we can truly state that the courtesies extended us by the members of your company in the way of write-ups and general help are highly appreciated.

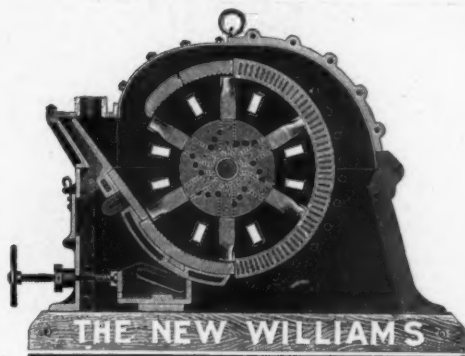
Very truly yours,

CENTURY CEMENT MACHINE CO.

ATB/M

[Signature]

Williams Raw Material Grinders

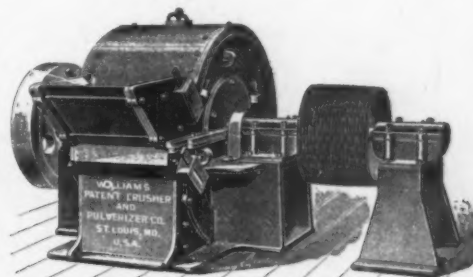


The "New Williams" Universal, our fine grinder, is used for preliminary work ahead of the Tube Mill, capacity No. 3 size, 800 bbls. in 22 hours, 95 per cent. through 20 mesh, with 40 to 50 horse power.

Also used extensively for fine grinding on Gypsum, Lime, Coal and Shale.

The "Vulcanite" Mill, our coarse grinder, prepares raw material ahead of Roller Mills. The No. 3 size has a capacity of 20 tons per hour, fineness, $\frac{1}{2}$ -inch, $\frac{1}{4}$ -inch and $\frac{1}{8}$ -inch, horse power 40 to 45.

Over 1550 machines in daily operation.
Bulletin No. 12 gives further details.

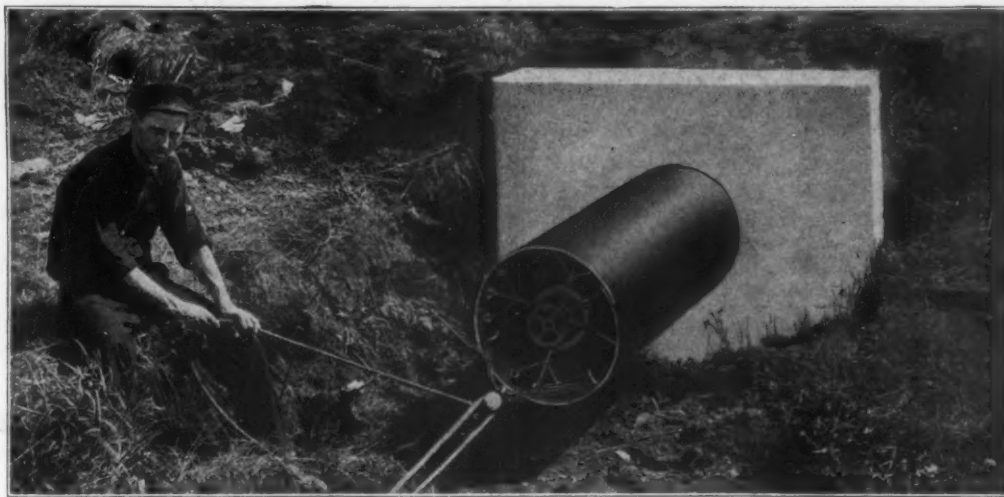


The Williams Patent Crusher & Pulverizer Co.

Works: 2701 North Broadway, St. Louis, Mo.
Sales Office: Old Colony Building, Chicago
San Francisco Offices: 428 Monadnock Building

MIRACLE COLLAPSIBLE STEEL FORMS

Absolutely
No
Trouble
in
Removing
the
Miracle
Forms



Showing Convenient and Easy Method of Withdrawing Form After Collapsing.

The Forms
Cannot
Stick
as they
Collapse
Enough
to Remove
Easily

— A Stake and Pulley is All that is Necessary when —

One Man Does the Work

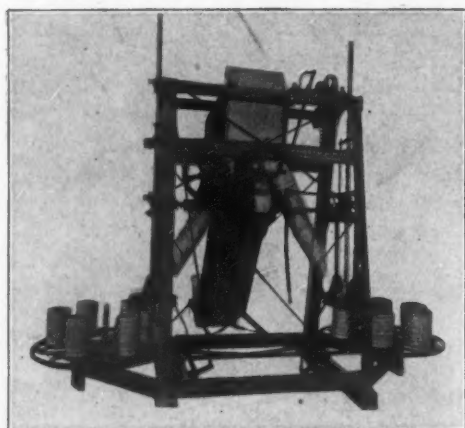
MARSH CO.

971 Old Colony Building

CHICAGO, ILL.

Tell 'em you saw it in ROCK PRODUCTS

THE McCracken Double Tile Machine



The McCracken Double Tile Machine makes all sizes of cement tile from 4 to 16 in. in diameter at the rate of from 10 to 20 tile per minute. Also makes building blocks or construction tile 8x8x16 at the rate of 2000 to 3000 per ten hour day.

The machine will make two different sizes of tile at the same time or building blocks and tile at the same time, or either end of machine can be used without using the other.

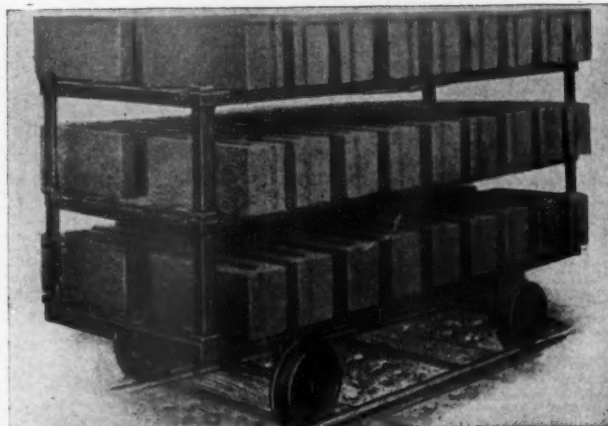
The machine has no cams and runs just as smooth at high speed as when running slow. Takes less labor per 1000 tile than any other machine.

Tile are packed so hard that the large sizes can be carried without the use of pallets. Machine is very simple and strong and runs very light, and elevator can be started and stopped without stopping the machine.

See the McCracken Machine before you buy. Write to

The Sioux City Cement Machinery Company
219 4th Street, SIOUX CITY, IOWA

The Chase Roller Bearing Car FOR CEMENT, BLOCK AND TILE



**BOTTOM AND SIDE DUMP CARS, TRANSFER
CARS, TURNTABLES, SWITCHES, ETC.**

You cannot afford to overlook the necessity of handling your material and product as economically as your competitor. Our goods will help you do this.

WRITE US FOR CATALOG AND PRICES

Chase Foundry Manufacturing Co.
COLUMBUS, OHIO

PERFECTION IN BLOCK MAKING

If you wish to attain this you should combine these three important features:

**Wet Process, Face Down,
Damp Curing.**

The PETTYJOHN INVINCIBLE Machine does this, and is the only machine that does. Tandem Invincible makes two blocks at once. Price \$65.00 and up. Single Invincible, \$35.00 and up. With our Triple Tier Racking System green blocks can be stacked three high direct from machine with inexpensive home-made rigging. Plans and blue prints free to customers. It economizes space, reduces off-bearing distance and above all insures slow, even, damp and perfect curing and bleaching.

Write for our latest edition of "Stone Making," a book of valuable data, just off the press—FREE

THE PETTYJOHN COMPANY

614 North Sixth Street Terre Haute, Indiana

Red, Brown, Buff and Black



**MORTAR
COLORS**



The Strongest and
Most Economical
in the Market.

Our Metallic Paints and Mortar Colors are unsurpassed in strength, fineness, and body, durability, covering power and permanency of color. Write for samples and quotations.

CHATTANOOGA PAINT CO.

Chattanooga, Tennessee

The Schenk Cement Drain Tile Machine

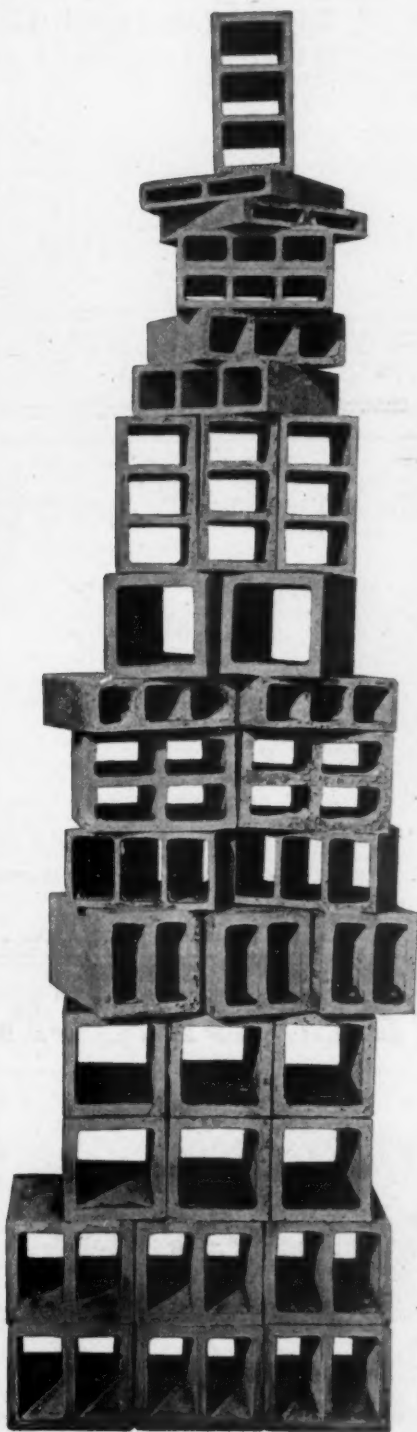


¶ The Schenk Machine has a capacity of from 3,000 to 5,000 cement drain tile in ten hours; it requires the aid of six men, a mixer and power to operate. The Schenk is sold on an iron-clad guarantee and is backed by the basic patents and the oldest and strongest company in the business.

¶ Our free catalog will give you information relative to the equipment necessary, the construction of buildings, the amount of capital required, and the amount of profit to be expected; in fact it tells you how to start a cement drain tile plant and what you will be able to realize on the investment.

The Cement Tile Machinery Co. Rath Street
Waterloo, Iowa

Tell 'em you saw it in ROCK PRODUCTS



Our 1910 Catalog

Gives the method of manufacture, fire and compression test data, and the endorsements of local architects and other building authorities. Also many other articles and illustrations of interest to the general public. May we send you, postpaid, a copy of our Catalog?

The Concrete Stone & Sand Co.
Youngstown, Ohio.



Has The First *Pauly* Concrete Tile Plant Been Successful?

This question, which is usually first asked us by interested parties, is best answered by two facts:—1. During the year of 1909, the demand in Youngstown, Ohio, could not be satisfied, and (2) the plants capacity output is sold until the middle of the summer of 1910, **in the City of Youngstown alone.** In this connection it might be stated also that 4 tiles of our most common size, 8x8x16, can be manufactured from one cubic foot of concrete, with a labor cost of 50 per cent of the cost of concrete anywhere east of the Mississippi.

A weatherproof home of fireproof material can now be built for almost wooden construction cost. These points have been clearly demonstrated in Youngstown by practical use of *Pauly* Concrete Structural and Fireproofing Tile, in a variety of buildings. The result gained has not only been a financial success, but also an enviable position in the estimation of the entire building public.

Persons interested in this practical and profitable phase of the concrete business, are always welcome by the The Concrete Stone & Sand Co., Youngstown, Ohio, where they will be shown every detail of the initial factory.



Tell 'em you saw it in ROCK PRODUCTS

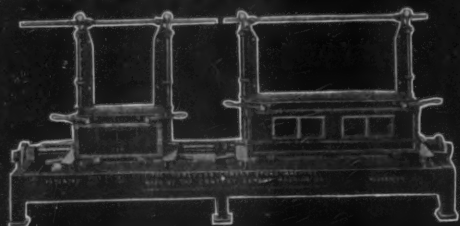
HERCULES BLOCK MACHINES

ARE THE FASTEST, SIMPLEST,
STRONGEST AND
BEST MACHINES BUILT
AND WE CAN PROVE IT
THEY EXPAND TO MEET EVERY DEMAND

THE ONLY machine making any size of stone from a 3 inch block to a 6 foot water table.

THE ONLY face down machine that allows for a really coarse WET mixture with fine facing.

THE ONLY machine on which four 16 inch stone can be made at ONE time, or two 20 inch, 24 inch or 32 inch stone at one time.



THE HERCULES IS AN OLD
ESTABLISHED MACHINE

Built along Correct Lines and Endorsed by the Leading Contractors and Builders. They are used in all parts of the world.

Hercules Machines

are the BEST for you—Because they go Further—Do more and Do it Better than other machines.

They are unlimited as to production. You can start with a small equipment and add to it gradually according to the demand.

And not be compelled to be continually buying new machines.

If you are going to manufacture Concrete Blocks write for our Catalogue.

Century Cement Machine

Co. 288-298 St.
Paul Street
ROCHESTER, N. Y.

Perfection at Last Attained in the Concrete Block Industry

The Perfection Power Block Machine is the only Power Block Machine on the market, making a Hollow Concrete Building Block under Heavy Pressure and at Great Speed.

Machines have been in constant use since July 1st, 1905, with practically no expense for repairs.

The machine handles sand, gravel, crushed rock, slag and coloring materials perfectly.

All materials accurately measured, thoroughly mixed and uniformly pressed under 200,000 pounds pressure.

Makes 8, 9 and 12x8x24 inch blocks in five faces, and fractional and angle blocks. Machine can be arranged to make Two Piece and Faced Blocks, if desired.

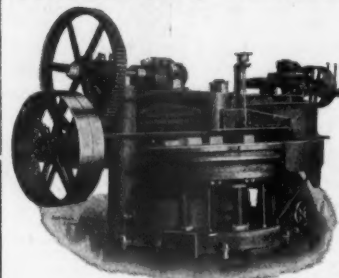
All machines delivered set up and put in operation to show a guaranteed capacity of 60 blocks (12x8x24 inch) per hour with five men.

Blocks perfectly cured in 24 hours in Vapor Curing Kilns of our own design. Full details, catalog, testimonials, etc., sent upon request.

THE PERFECTION BLOCK MACHINE CO.
SIOUX FALLS, SOUTH DAKOTA.

The American Sandstone Brick Machinery Co.

SAGINAW, MICH.



Improved Saginaw Rotary Press.

Built either right or left handed in three sizes of capacities of 800, 1400 and 2200 brick per hour. Can be equipped with extra table for making face and fancy brick on which double pressure is exerted.

Complete Sandstone Brick Plants or Partial Equipments Installed Under Absolute Guarantees as to Capacity, Quality, and Cost of Production.

WE are the oldest manufacturers of Sand Lime Brick Machinery in the U. S. today, and have more successful plants in operation than any other Company. Why not profit by our experience? Send us samples of your sand and let us advise you as to its quality for brick purposes and what machinery you will require to produce the best results. Write for catalogue "C" describing our system in detail.

SAND LIME OR SILICATE BRICK



This plant located at South River, N. J., was formerly intended to operate under the "Division System" but is now being reconstructed to conform in every detail to the Wiebe-Hydro-Lime-Silicate-Process, and will be when completed the largest plant in the United States with a daily capacity of 100,000 brick.

SAND DRYER

High efficiency and durability

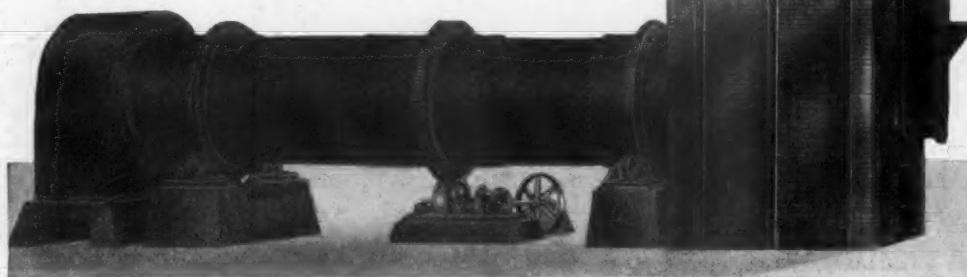
RESUME

Dating as far back as 1901, when the manufacturing of commercial silicate brick was introduced into this country, no system has been more successful than the so called "Silo" or "Division" method.

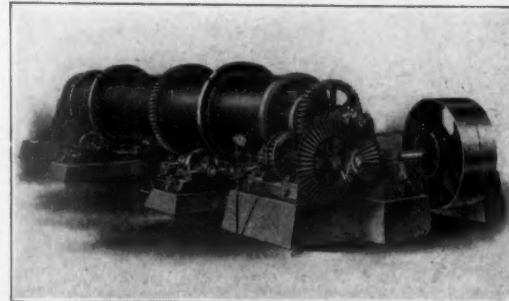
In the ratio that the Silo or Division Process is superior to all other systems hitherto employed, in that proportion the Wiebe-Hydro-Lime-Silicate process is superior to the Division method.

All other processes are commercial impossibilities, and those who are operating under these old methods are losing money and producing an inferior quality of brick.

Will dry your sand perfectly and still deliver it at the discharge end at a very low temperature. At the point where the material contains the most moisture it strikes the hottest fire, and the moisture is immediately drawn away from the material being dried.



WIEBE ENGINEERING COMPANY



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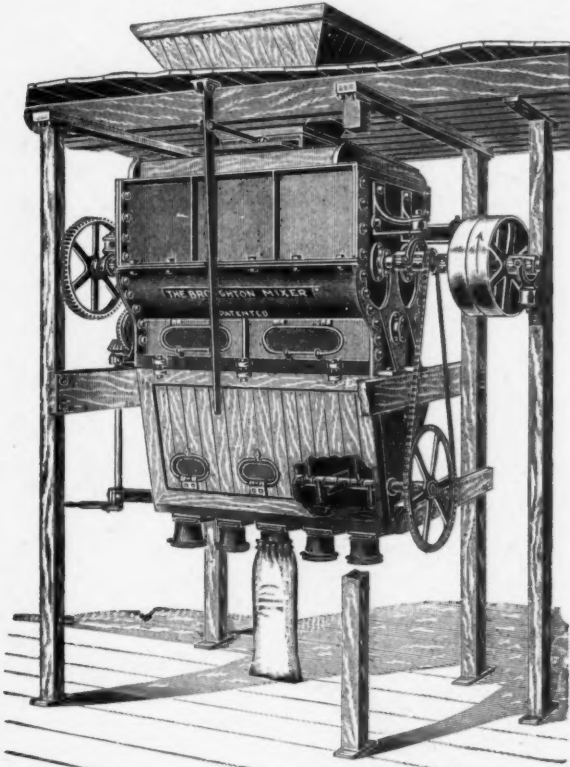
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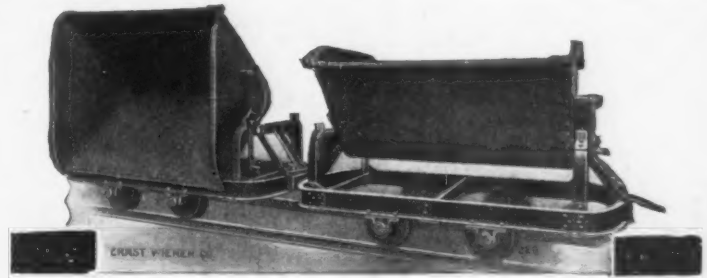


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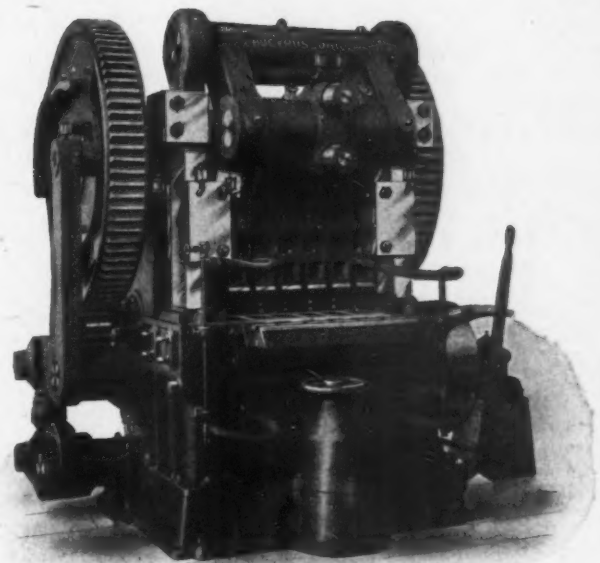
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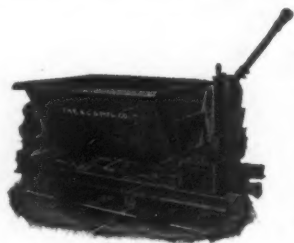
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